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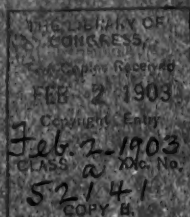
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HOW
TO
SAVE
HORSE
FLESH

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L. C. W. 9, Feb. 5-03





Yours truly
L. W. Leitchhead.

PUBLISHER'S PREFACE

It is our endeavor to publish a book which will be accepted as authority in every neighborhood where one is in use.

To make a book sufficiently brief, and without losing any item of interest, has been made possible by the large number of illustrations used.

We wish to have a book which will not tire the busy stockman. Many ideas which we have given in this book will be invaluable if known in advance of trouble. For this reason a hasty reading of the book will increase its value as a reference book.

As an aid in using as a reference, always rely upon the index in the back pages.

In all treatments that we advise, it is necessary to follow the instructions as given in the book and in more detail as the directions read upon our prepared prescriptions.

In many instances we believe the best interests of the stock owner is to have the special prescriptions prepared at the drug store. In every such case we give the advice with the prescription printed out complete in the book.

We wish in having prescriptions filled it will be possible to have our agency store prepare for you. Our agency stores have interest in the cure of every case treated from our advice. This interest should not be overlooked as doubtless it has value.

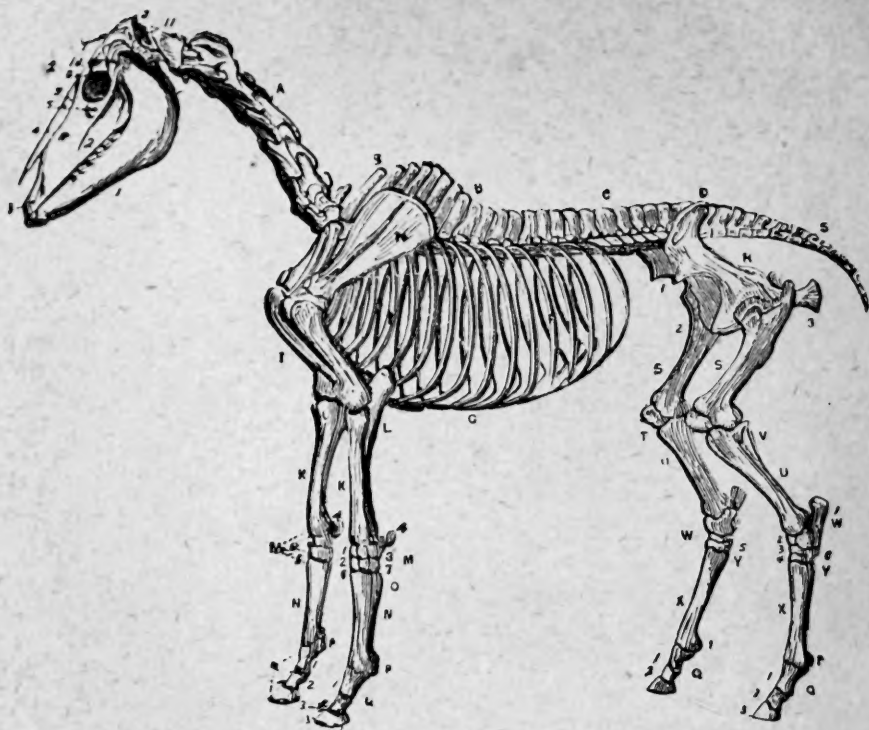
Our guarantee given for all prescriptions prepared under our name "Leithhead's Guaranteed Veterinary Remedies" is only effective when from one of our established agencies.

Kindly note the agency advertisement who has supplied you with this book.

Respectfully,

L. W. LEITHHEAD DRUG CO.

PUBLISHERS.



THE SKELETON OF THE HORSE.

NAMING EACH PART AS NUMBERED, ACCORDING TO THE FOLLOWING—BONE NAMES:

A. Cervical vertebrae.

B. to B. Dorsal vertebrae.

C. Lumbar vertebrae.

D. Sacrum.

E. Coccygeal bones.

F. to F. Ribs.

G. Cartilage holding the ribs.

H. Scapula.

I. Humerus.

K. K. Radii.

L. Ulna.

M. Carpus, or 8 knee bones, as numbered

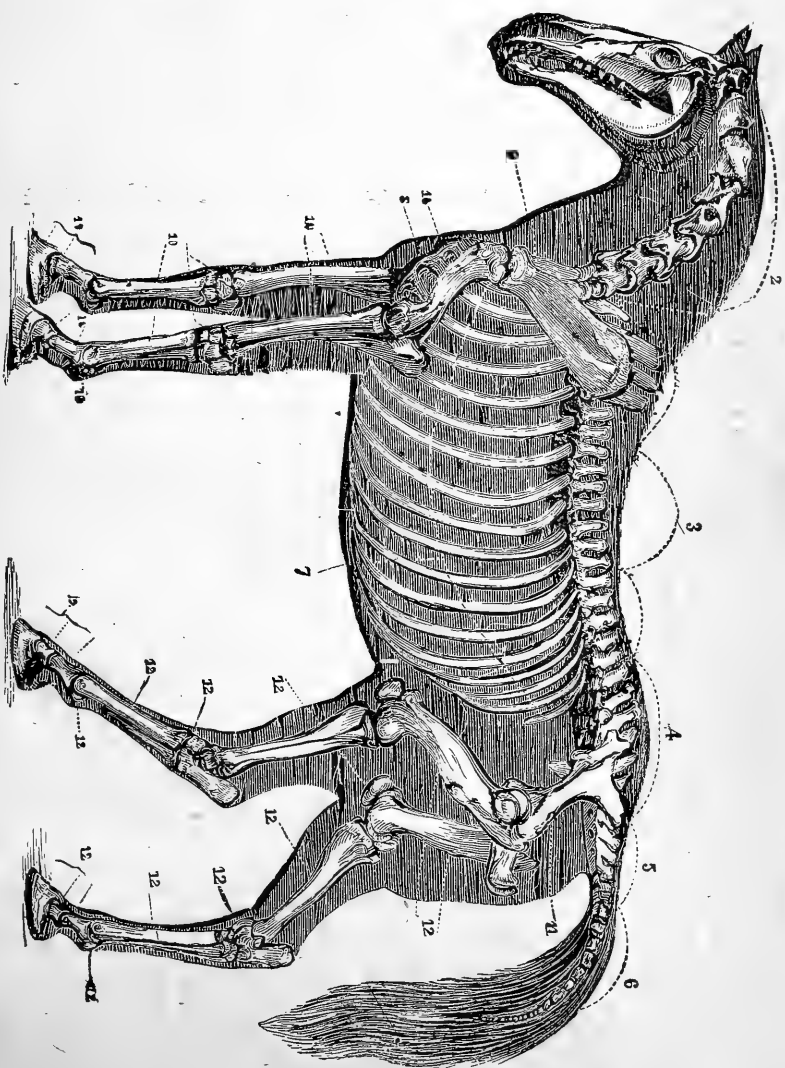
N. N. Large meta carpal.

O. Small meta carpal.

P. P. Sesamoid bones.

Q. Q. Phalanges, which includes 3 as numbered

1. The head—cranium.
2. Bones of the neck—cervical vertebrae.
3. Back bone—Dorsal vertebrae.
4. Loin—Lumbar vertebrae.
5. Rump—Sacral vertebrae.
6. Tail—Caudal vertebrae.
7. Ribs.
8. Breast bone—Sternum.
9. Shoulder bone—Scapula.
10. Front limb.
11. Cavity of body—Pelvis.
12. Hind limbs.



FLESH AND SKELETON OUTLINE OF THE HORSE,
SHOWING AND NAMING THE VARIOUS DIVISIONS OF THE SKELETON.

Nursing and Care.

GRADUATION OF DOSES.

The doses given below are for full-grown animals of medium size; make allowance for weight above or below the average of his kind. For young animals on account of their smaller size need less medicine. The following table may answer this:

Horses, etc.	Ox.	Dose.
3 years.	2 years.	1 part.
1½—3 years.	1—2 years.	½ part.
9—18 months.	6—12 months.	¼ part.
5—9 months.	3—6 months.	⅛ part.
1—5 months.	1—3 months.	1-16 part.

Sheep.	Swine.	Dose.
1½ years.	15 months.	1 part.
15 months.	8—15 months.	½ part.
5—9 months.	6—8 months.	¼ part.
3—5 months.	3—6 months.	⅛ part.
1—3 months.	1—3 months.	1-16 part.

Dogs.	Dose.
½ year.	1 part.
3—6 months.	½ part.
1½—3 months.	¼ part.
20—45 days.	⅛ part.
10—20 days.	1-16 part.

Nervous animals are more impressible, continued use tends to decrease the action of a single drug.

NURSING AND FEEDING SICK ANIMALS.

Much quicker recovery follows good nursing of the sick animal. In order to do it well the nurse must know the ways of the animal in health. A few simple rules will assist the beginner. First, by having it warm in the winter and cool in summer. Second, plenty of fresh air to breathe, avoid a draft. Third, ventilation without drafts. Fourth, protection, a woollen blanket in winter and linen sheets or net in summer. Hoods to cover the head and neck, if the stable is not warm. Warm or the right degree is from 55 to 60 degrees F. Weak lambs and sick dogs require from 62 to 70 degrees F. to be called warm. The house is better for them.

A place with good drainage is the best location for stables. The food to be simple, clean, nutritious, cooked, if possible, changed occasionally and administered often and in small quantities. Give green food, if possible. Oats, corn, barley, shorts, etc., ground and scalded with boiling water, covered and left to steam till cold, and then given. Warm milk for calves, and the same diluted and sweetened a little for lambs and foals; beef, tea, raw eggs, porridge of either oat or corn meal and milk for dogs, and the same for pigs will be found to be the best diet, given often and a small amount at a time, be careful not to over-feed, it increases a fever. Horses, cattle, etc., feed three or four times a day; foals, calves, lambs, dogs, etc., every two to four hours.

Fever patients must have pure water near, so they can help themselves when they wish it. Those suffering from diarrhoea or excessive purgation, water four or five times a day, but in smaller quantities.

Rest must be given to sick animals; many cases prove fatal from working too long after being taken sick. Do not put to work too soon after recovery.

Teeth of the Horse.

COLTS' TEETH.

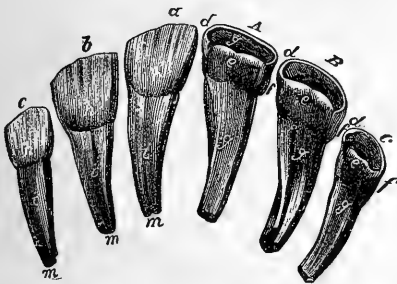


FIG. 1

The milk incisors of the lower jaw as seen from the right side, when fully developed, are here represented. The exterior surface of the teeth are arched as above represented. The explanation of the figure is: *a*, the nippers; *b*, the middle tooth; *c*, the corner tooth; *h*, the contracted body of teeth; *i*, the narrow arched neck of teeth; *m*, the root of teeth; *A, B, C*, the concave hollow of teeth towards hollow of the mouth; *d, A f, d B f, d C f*, the outer edges of teeth; *d e f*, the inner edge of teeth, somewhat lower than the outer edge — the mark is inclosed within these inner and outer edges; *g*, the hollow inside surface of body of tooth.

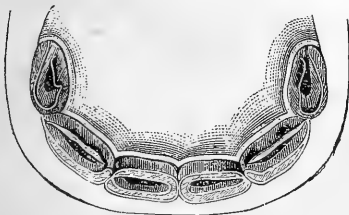


FIG. 2. HALF YEAR.

An inside view of the lower jaw of a half-year-old foal. The outer and inner edges of nippers are worn, while only the outer edge of the middle is worn and the corner teeth have not yet come into contact.

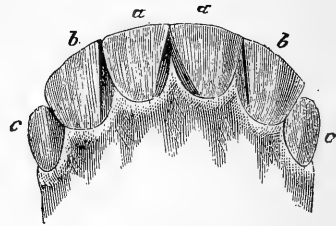


FIG. 3. HALF YEAR.

Outer side of the jaw of a foal six months old. *a, a*, the nippers; *b, b*, the middle tooth; *c, c*, the corner tooth.

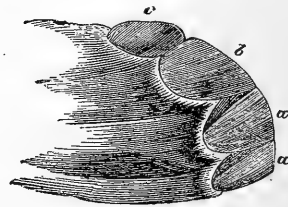


FIG. 4; HALF YEAR.

A side view of the jaw of a foal at six months old. *a, a*, the nippers; *b*, the middle tooth; *c*, the corner tooth.



FIG. 5 ONE YEAR;

At one year old the lower jaw presents the appearance represented in this figure. The outer and inner edges of all the incisors are partly worn by grinding, while the inner edges of the corner teeth alone are uninjured.

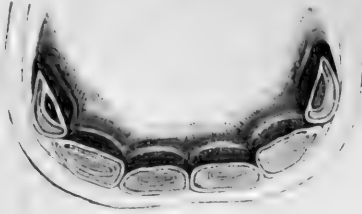


FIG. 6. TWO YEARS.

Here we have the lower jaw as it appears at two years old. The mark of the nippers and middle teeth are now worn down as well as their edges. The inner edge of the corner teeth also begins to show wear.

The Colt's teeth begin to shed at two and a half years old, and the permanent or Horse's teeth then appear to take their places.

HORSE TEETH.

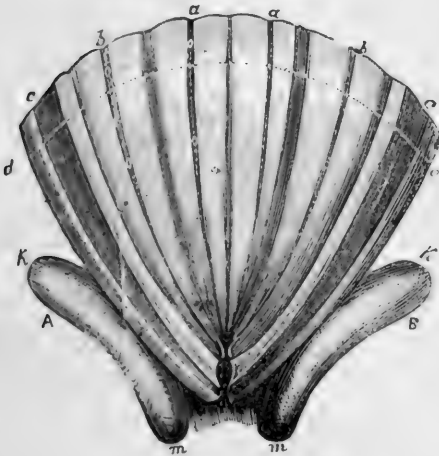


FIG. 7. A.

The horse incisors of the lower jaw as seen from the outside, with the outer surface arched towards the bony blade of the socket. The hook teeth are now seen for the first time.

Explanation—*a, a*, the nippers; *b, b*, middle teeth; *c, c*, the corner teeth; *K, K*, the hook teeth, *e, d*, the line from *d* to *e* shows the position of the cavity in the outer partition of the mark; *o, o, o*, the furrows which distinguish the horse's teeth from colt's teeth; *m, m*, the roots of the hooks.

FIG. 7. B.

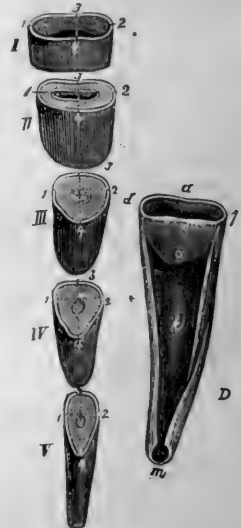
The incisor teeth of the lower jaw as seen from the inside of the mouth. *a, a*, the nippers, show-



ing wear of the upper and outer edge; *b, b*, the middle tooth, showing wear on the outer edge while the inner edge remains uninjured; *c, c*, the corner teeth; *d, e, e, e*, the dotted lines, mark the divisions between the crown of the teeth and the gums; *K, K*, the hook teeth about to push through the gums; *m, m, m, m*, the roots of the teeth not filled out with bony substance.

FIG. 8. A. D.

A nipper in the various stages of development from three to twenty-four years. *I* is the incisor pushing through at three years old; from *1* to *2* is its breadth, from *3* to *4* its thickness. *II* is the same tooth of six years, the crown worn off $\frac{1}{4}$ inch, the breadth decreasing and the thickness increasing so that the surface takes more of an oval form. *III* is the tooth at twelve years old, the surface nearly round and the breadth and thickness nearly the same. At eighteen years old the surface becomes triangular, as shown at *IV*.



At twenty-four years the tooth is just the reverse of what it was at three years, and the breadth is only half the thickness.—See *V*.

The large figure *D* shows an incisor of a full grown horse, split lengthwise. *d, a, f*, the outer raised edge; *a, o*, the funnel shaped cavity of the tooth; *k*, the hollow body of the tooth; *m*, the root not yet filled.

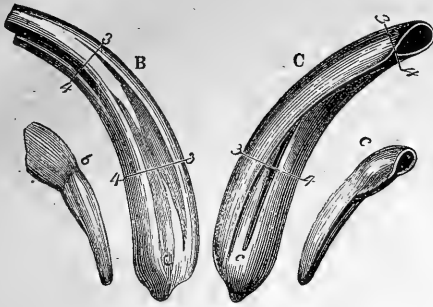


FIG. 8. B. C.

The large figures B. and C. represent side views of a horse incisors, in which the root *a*, *c*, is twice as thick as the upper end. The two small figures on the right and left at *b* and *c* show side views of a foal's tooth.



FIG. 9. TWO AND ONE HALF YEARS.

The lower jaw at two and one half years old. The horse nippers are just pushing through the gums, while the middle and corner teeth not yet shed (foal teeth) present a smooth, worn appearance.



FIG. 10. THREE AND ONE-HALF YEARS.

At three and a half years the lower jaw presents the appearance shown in this figure. The middle (horse teeth) are just pushing through, and the nippers show wear on the outer edge. The corner teeth (foal teeth) are worn down blunt.

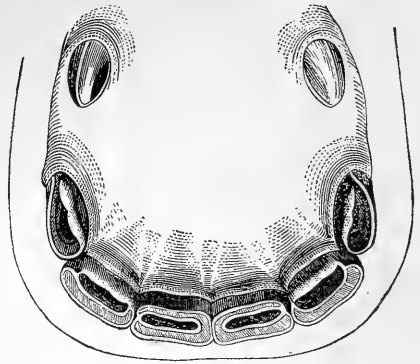


FIG. 11. FOUR AND ONE-HALF YEARS.

At four and a half years the foal teeth are all gone from the lower jaw. The nippers show wear on both edges, and the outer edge of middle teeth is worn. The hook teeth and the corner teeth of the horse are just appearing.

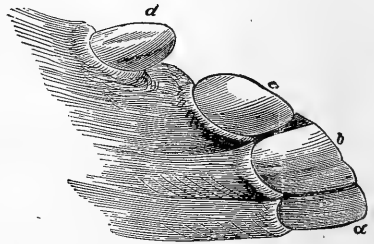


FIG. 12. FIVE YEARS.

A side view of the lower jaw at five years old.

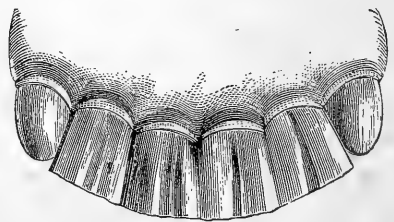


FIG. 13. FIVE YEARS.

A front view of the lower jaw at five years old is here given.



FIG. 14. FIVE YEARS.

The lower jaw at five years—an inside view. The nippers are worn down on both edges until the mark is nearly gone. The outer edge only of the middle teeth shows wear, while the outer edge of the corner teeth is just beginning to be worn a little. The full-grown hook teeth do not show any wear whatever.



FIG. 15. SIX YEARS.

In the lower jaw at six years old the nippers are worn down even with the middle teeth, which latter still have a cavity. The inner edge of the corner teeth is also even with the outer one.



FIG. 16. SEVEN YEARS.

The lower jaw at seven years is here repre-

sented. The pointed ends of the hook teeth have become more rounder, and worn away somewhat. Both edges of the corner teeth are worn to a smooth surface, with a small cavity between them. The middle teeth have lost their cavity and show an even surface all the way across.

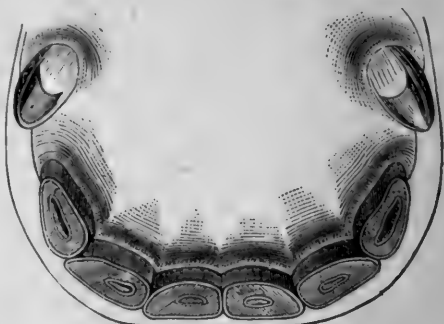


FIG. 17. EIGHT YEARS

At eight years old the teeth of the lower jaw, forward of the hooks, are all equally worn, and only a trace of the mark is seen in the corner teeth. The edges of the hook teeth are worn down almost half.

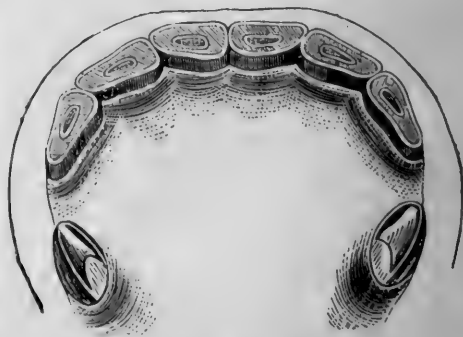


FIG. 18. NINE YEARS.

The upper jaw at nine years is shown in the above figure. The mark in the corner teeth is comparatively deep and clearly defined; the mark is still visible in the middle teeth; but it has almost entirely disappeared from the nippers, and the inner edge is worn down.

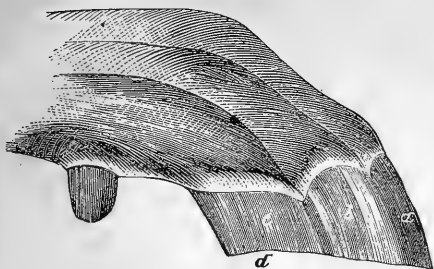


FIG. 19. NINE YEARS.

The upper jaw at nine years old—a side view. *d*, the indentation usually seen in the corner tooth.

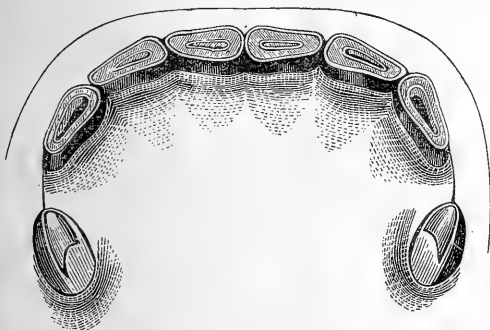


FIG. 20. TEN YEARS.

In the upper jaw at ten years the mark in middle teeth is worn down. The mark in the corner teeth is still visible.

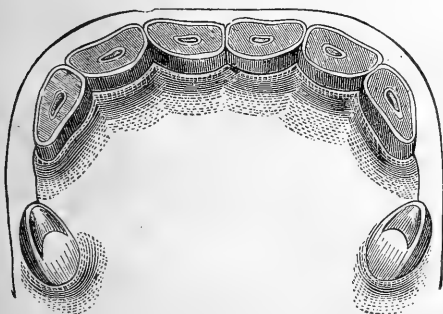


FIG. 21. ELEVEN YEARS.

In the upper jaw at eleven years old the mark of the corner teeth is worn down even with the edges.

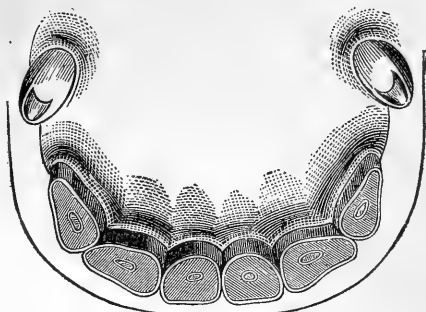


FIG. 22, TWELVE YEARS.

Showing the lower jaw at twelve years old. The nippers are round, or nearly so—as thick as they are broad. The middle teeth are getting round, and the corner teeth are gaining in thickness by comparison with their breadth.

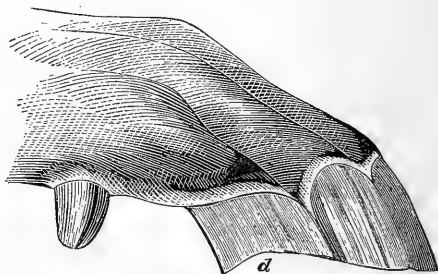


FIG. 23. TWELVE YEARS.

In the upper jaw at twelve years the indentation in corner tooth has become larger and more plainly visible. *d*, the indentation increased in size.

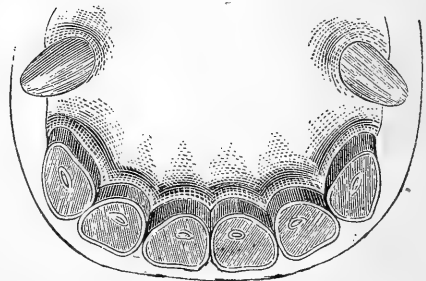


FIG. 24. THIRTEEN YEARS.

The nippers and middle teeth of the lower jaw at thirteen years old are almost perfectly round. Their breadth and thickness are the same. The corner teeth are not yet round, but are fast becoming so. The hook teeth are now blunt.

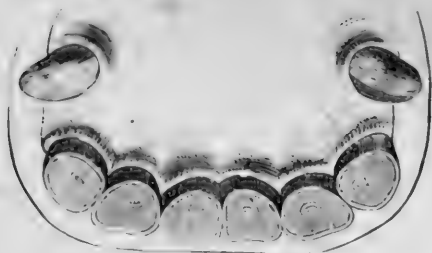


FIG. 25. FOURTEEN YEARS.

The corner teeth of the lower jaw have now become round.

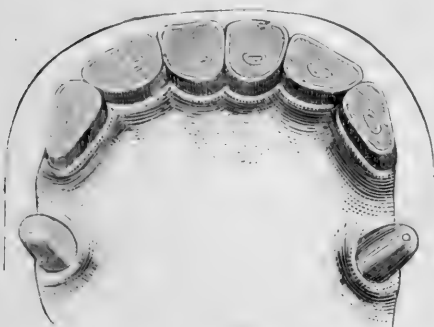


FIG. 26. FIFTEEN YEARS.

The nippers of the upper jaw become round at fifteen years olds.



FIG. 27. SIXTEEN YEARS.

The middle teeth of the upper jaw become round at sixteen years old.



FIG. 28. SEVENTEEN YEARS.

The corner teeth of the upper jaw become round at seventeen years old

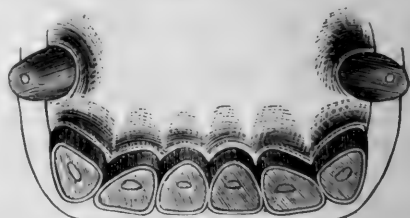


FIG. 29. EIGHTEEN YEARS.

The nippers in the lower jaw are triangular at eighteen years old.

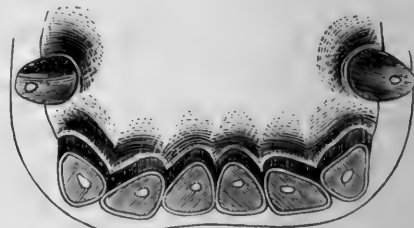


FIG. 30. NINETEEN YEARS.

The middle teeth of the lower jaw are also triangular at nineteen years old.



FIG. 31. TWENTY YEARS.

In the lower jaw at twenty years old the corner teeth have become triangular.

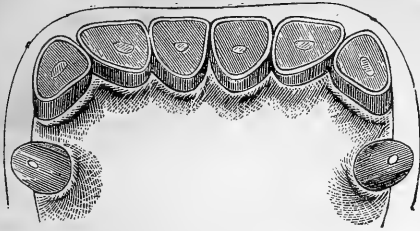


FIG. 32. TWENTY-ONE YEARS.
The nippers of the upper jaw are now triangular.

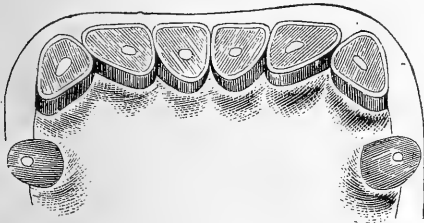


FIG. 33. TWENTY-TWO YEARS.
The middle teeth of the upper jaw become triangular at twenty-two years old.

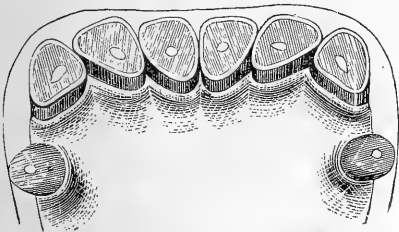


FIG. 34. TWENTY-THREE YEARS.
The corner teeth of the upper jaw assume the triangular shape at twenty-three years.



FIG. 35. TWENTY-FOUR YEARS.
The nippers of the lower jaw are now twice as thick as they are broad.



FIG. 36. TWENTY-FIVE YEARS.
The middle teeth of the lower jaw are now twice as thick as they are broad.

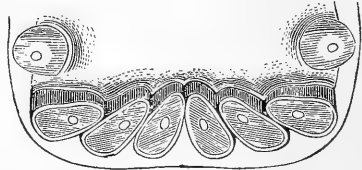


FIG. 37. TWENTY-SIX YEARS.
The corner teeth of the lower jaw at twenty-six years are twice as thick as they are broad.

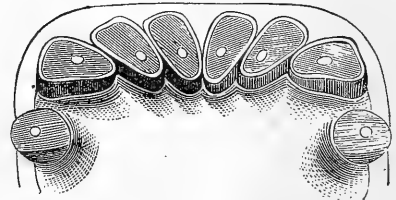


FIG. 38. TWENTY-SEVEN YEARS.
The nippers of the upper jaw have now become twice as thick as they are broad.

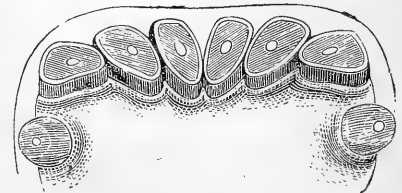


FIG. 39. TWENTY-EIGHT YEARS.
The middle teeth in the upper jaw are twice as thick as they are broad.

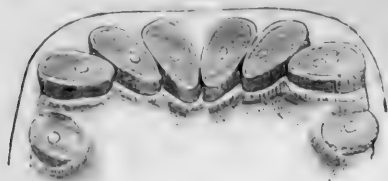


FIG. 40. TWENTY-NINE YEARS.

The corner teeth of the upper jaw at twenty-nine years old are twice as thick as they are broad

HORSES TEETH—Irregular



FIG. 41. TWENTY YEARS.

Here we have a tooth of the lower jaw that is twelve lines too long, as shown by the diagram. It has grown up a line each year, but, owing to its position too far forward in the mouth, it has not worn down proportionally. The mark indicates eight years, but we must add twelve for the extra lines—which gives twenty years as the true age of the horse.

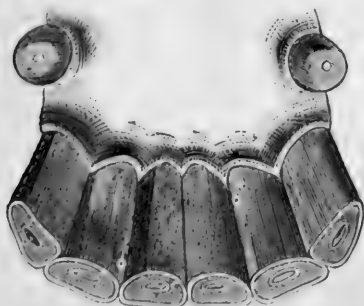


FIG. 42. TWENTY YEARS.

Showing an inside view of the lower jaw at twenty years when the teeth are twelve lines too long. The mark and the friction surface only show eight years' wear.



FIG. 43. TWENTY YEARS.

Here the superfluous length of the same teeth is removed, and we have an inside view of the lower jaw, showing the natural wear of a twenty year-old mouth.

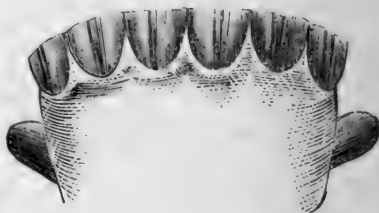


FIG. 44. TWENTY YEARS.

This gives an outside view of the lower jaw, showing the teeth in their proper length at twenty years.



FIG. 45. SIXTEEN YEARS.

Here we have an outside view of the lower jaw at sixteen years, showing teeth ten lines too long.

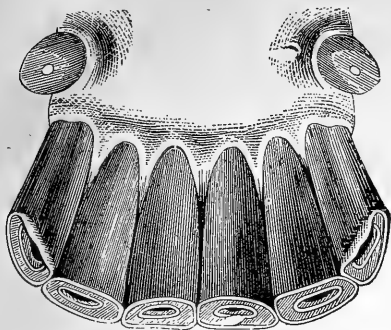


FIG 46. SIXTEEN YEARS.

This is an inside view of the same jaw in which the mark indicates six years, but, as the teeth are ten lines too long, the true age is sixteen years.



OUR GUARANTEE
TRADE MARK
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1902

Diseases of the Feet.

CARE OF THE FEET IN THE STABLE.

Care of the feet influences health. City horses continually and country horses in dry weather, should have the feet soaked out in a foot bath or clay puddle, or packed with moist sponge or oil-cake two or three times a week. Neglect causes the hoof to contract from want of moisture, gets brittle, crack and lose nearly all toughness. If the hoof is brittle or cracks, Leithhead's Hoof Ointment must be used in addition to the above.

CORNS.

Remove the shoe; pare out the quarter to remove all pressure, if there be any matter under the sole, open to let it out, then put the foot into a linsed poultice made soft with hot water. After twenty-four hours, renew it. After the poultice is off, examine



Sole of Foot Showing position of the corn.

Sole of a foot showing a small scarlet spot indicating a new corn.

the foot to see if it needs any more paring; if the hole is deep, you will need to cut the hoof well away to allow the matter to escape freely; if you do not do this the matter will work up through to the top of the hoof. Before poulticing the second time use Leithhead's White Liniment in the corn. Dress with the use of Leithhead's White Liniment once a day till well. For proud flesh burn it with powdered blue vitriol.

QUITTOR.

If the festering of any sore works through and breaks out at the top of the hoof at the junction with the hair, it is Quittor.

WHAT TO DO. Poultice the foot for twenty-four hours to soften. Open the diseased part at the bottom to allow the matter

if any, to run out, if none is found at the bottom, do not cut the hoof to make it bleed, this would only make another sore, and do



A QUITTOR
In active suppuration before the pus has broken out at the top.



A QUITTOR
After it has broken out at the top.

no good. Open freely at the top; probe with a piece of smooth rounded whalebone to find how deep the hole is, and in what direction. Then follow the probe down with the knife and open right out and down the hoof, as far as the hole goes, taking out a V-shaped piece of the wall to allow the matter to escape at the bottom, instead of making it come out at the top. Scarify the purple flesh to set up a healthy artificial inflammation in the part. Then sponge it out with warm water to cleanse it and follow with Leithhead's White Liniment.

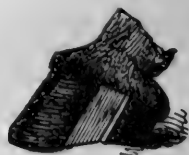
QUARTER AND SAND CRACKS.

Easily known as but a crack or split of the hoof. It may be at the top or bottom, or of any size in any part of the hoof. Often causes lameness. Treatment as follows;

If the flesh grows up between the edges of the crack, burn it down with powdered



QUARTER CRACK.



FALSE QUARTER
Or deficiency of the outer wall.



CLOSING A HOOF CRACK with thin wire.

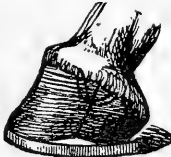


SAND CRACK Pared to offer relief. Shod with clips.

blue vitriol, applied once a day. When it is dry dress it with pine tar once a day. Blister



FALSE QUARTER special shoeing to relieve



QUARTER CRACK To the top, trimmed and shod.

the coronet at the junction of the hoof and the hair, with Leithhead's Blister Salve



QUARTER CRACK Showing the hoof pared and shod over the broken portion.



SAND CRACK Dressed and shod for relief

around from heel to heel, but do not blister back of the heels, in the hollow of the pastern.

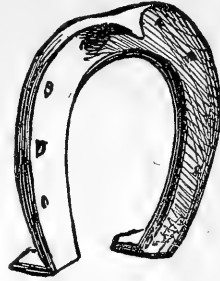
SEEDY-TOE.

It is a dry mealy condition of the wall of the toe. Take the shoes off and pare away



SEEDY TOE SHOWING THE SEPARATION OF THE WALL FROM THE SOFT PARTS UNDERNEATH.

to remove bearing. Pick out the mealy substance that breaks easily, and use warm tar,



A SHOE WITH CLIP LIKE THIS CUT REPRESENTS WILL SOMETIMES CAUSE SEEDY TOE.

pressed in with tow. Replace the shoe and



TO AVOID SEEDY TOE
pare foot like this cut shows before shoeing with the clip.
apply Leithhead's Blister Salve to the coronet.

PRICKING FROM NAILS.

When you have removed the shoe, and found where the prick is, pare out the hole, and around it a little, to thin the hoof; this will relieve the pressure when it begins to swell. Then turn in a small quantity of Leithhead's White Liniment. This will tend



PRICKING FROM NAILS SHOWING THE SHOE partly pulled off and nails pricking foot when the weight comes down.

Prevention is Worth More than Cure—Leithhead's Hog Cholera Remedy.

to prevent suppuration. Then put the foot in a boot, or bag of linseed meal poultice. Change it once a day and examine the wound each time, to see that any matter that forms can escape. This is very important. If proud flesh comes up, keep it down with powdered



THE SOLE OF A FOOT SHOWING nail wound and how to pare it.

blue vitriol, applied once a day; if it comes up suddenly, as large as your thumb, you can cut it off with perfect safety. Then, when it stops bleeding, dress it with vitriol. As soon as there is no more matter and the lameness is nearly gone, leave off the poultice and dress it once a day with pine tar.

ACUTE FOUNDER.

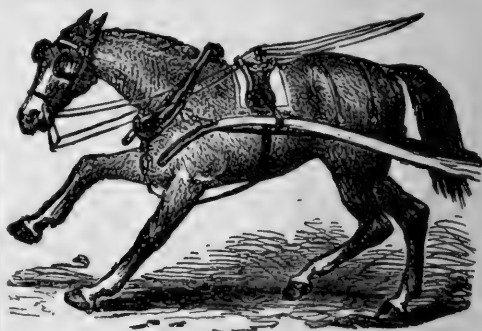
Founder is of two kinds, acute and chronic. It is acute if the symptoms are aggravated with more or less fever. It is chronic when diseased condition has taken an organized form, and is not attended by any fever, either by a slight local heat.

Give one pint of raw linseed oil, then pull off the shoes and pare to let him stand on the sole and frog. If the feet are firm lay

him down to remove them. Then use a hot foot bath one or two feet at a time. Have fresh and hot water with a little mustard in it. Bathe the legs as high as the knees and hocks, with this water and mustard, let stand until the water cools, then put each foot into a linseed poultice and bandage the legs with flannel. Repeat morning and night until the soreness is nearly gone from the feet. Then stand him in a clay puddle, day times only and continue as long as there is any stiffness. Leave the shoes off till well enough to work. Use Leithhead's Fever Cure for fever, until it leaves. Feed lightly on warm mashes, scalded oats, grass, etc.

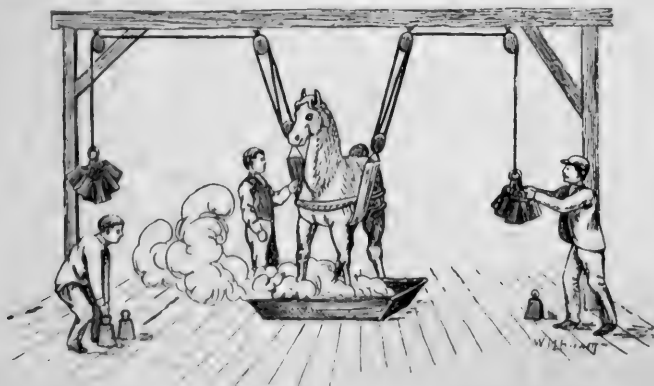
CHRONIC FOUNDER.

You cannot do anything to cure it. Some help is derived by using Leithhead's Blister



A HORSE SUFFERING WITH CHRONIC OR SUB-ACUTE FOUNDER.

Salve around the coronets once a month. Reset the shoes often.



A CONVENIENT WAY TO TREAT THE FEET OF A FOUNDERED HORSE.



A HOOF WITH RINGS SHOWING EFFECT OF FOUNDERED CONDITION.

PUMICED FEET.

Acute laminitis neglected causes the connection between the sensible and insensible laminae, or leaves to be destroyed by the effusion that accumulates between them, the toe of the bone tip on the sole pushes down to the ground, and makes the lower surface convex instead of concave, as it should be. Nothing can be done to cure this trouble.

THRUSH.

Thrush is a rotting of the frog, and is attended with a very offensive, black watery discharge. The frog would rot off to the heels if not attended to.

Trim off the ragged parts of the frog, clean out the holes and crevices with a case knife, then apply linseed poultices with charcoal. After twenty-four hours take off and clean. Dress the affected parts with Carbo-Zinc salve well introduced into all the cracks. Repeat this the first and third day. When it is all dried up dress the parts with pine tar.

NAVICULAR DISEASE.

The tendons of the leg passing down the back of the leg to the foot, and around be-



DIAGRAM

Showing course of the nerve that is severed in neuritis. A is the nerve leading to the frog.

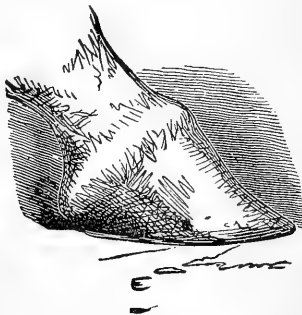
neath the navicular bone and joint of the foot, directly above the frog, attaches itself to a rough hollow on the sole of the coffin bone. Disease of this part of the tendon, bone or joint is navicular disease.

Relieve the tension on the bone tendon.

Then put the foot in a hot, soft, linseed poultice; change it once a day, and continue it for a couple of weeks. Matter never shows itself in navicular disease. Trace the pus if there is any to its origin, and treat it as if for pricks from nails, and corns. After ten days, if the horse is better, take off the poultices and apply Leithhead's blister salve, to the hollow of the pastern, if it is swollen, if not, let alone. Then turn him out to grass, with the shoe on, but reset it once a month, with the same directions carried out as given above.

CONTRACTIONS OF THE FOOT.

Nearly always the effect of some other disease. When there is no other disease in the foot, and contractions come from neglected shoeing, take off shoes, pare the feet down to be able to press the sole with the thumb, open the heels up to the soft parts, rasp off



A LOW-HEELLED FLAT FOOT

Seldom afflicted with contraction.

the quarters to leave the frog as large as possible. Then rub in a little Leithhead's Blister Salve to the coronet, smear the quarters with Leithhead's Hoof Ointment once a day, and turn out to pasture on soft ground.



SHOE LEFT ON TOO LONG.

Causing the hoof to grow over the shoe at the quarters and contract.

Will Add Flesh to Your Swine Herd—Leithhead's Hog Cholera Remedy.



A STRONG, UPRIGHT, HIGH-HEELLED FOOT
Predisposed to contraction.

GRAVEL.

Trim the hoof off, rinse it out with a syringe by shooting the water into the hole with some force; then dig it out carefully, and inject into it Leithhead's White Liniment. Apply a poultice, hot and soft. Repeat treatment once a day till cured.

CANKER.

Disease of the feet caused by the exposure of the soft structure often causes a shreddy leathery substance, to take the place of a sound hoof. This will be spongy, enlarged,



CANKER OF THE SOLE.
The horny sole being removed.

soft and tender. Bad cases are usually considered incurable; most cases will yield to proper treatment. Pare away all you can without bleeding, then dress with powdered blue vitriol. Keep the sole and all dressed portions dry; moisture prevents a solid



CANKER OF THE FROG.
The horn laid back to show the diseased parts.

growth. If any pus comes from the leaves insert into the hole a stick of lunar caustic. Repeat once a day till the leaves are all reduced to a solid surface, then, if it is raw flesh, apply burnt alum or air-slacked lime alternating them occasionally with the vitriol. Keep the sore part dry; after getting better dress with pine tar and tow. The horse may be shod as soon as this.

CALKS.

If the wound is of any length beyond one inch, stitch it. Put the stitches half an inch



CALKS OR TREADS ON THE CORONET.
apart, first clipping off the hair. If any artery is cut, put a dry sponge over it and bandage tightly with a coarse cotton band-



CALKS OR TREADS ON THE CORONET.
age, leave it on ten or twelve hours then remove and dress with Leithhead's White Liniment.

FRACTURES OF THE BONE OF FOOT.

Remove the shoe, find the location of the injury by pressure, tapping and pinching. Pare or file away the hoof, as to give it a chance to swell and relieve the pressure. Put the foot in a poultice; repeat once a day, and relieve the pain as much as possible by paring away all the hoof you can over and around

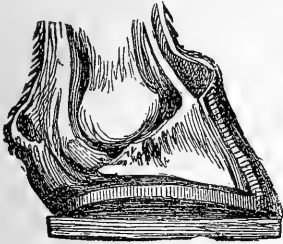
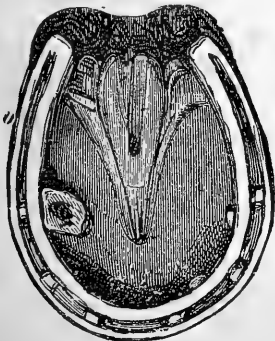


DIAGRAM OF FOOT

Showing the position of the coffin bone which is often fractured. the part. If there is pus, you may be sure there is a broken piece of bone that is acting as an irritant, and must be removed. Remove all pieces, for every piece that is separated from the main body will have to come out. When all pieces are removed, dress with Leithhead's White Liniment twice a day until the discharge is stopped.

STONE BRUISES.

The shoe being removed, put into a poultice for twenty-four hours, liberate the pus that may have been formed. If none is found without cutting too deep, replace the poultice and



BOTTOM OF FOOT

Showing a stone caught between the sole and shoe.

try again the next day. Locate the bruise by pinching all around. If the tissue is off the coffin bone, it will come out like a core when it is sufficiently rotted and the sole is cut underneath. This sole must be cut away that the core may come out. When the core comes out dress the spot with Leithhead's White Liniment.

SIDE BONE.

Side bone is the hardening of the lateral cartilages of the fore feet. They are covered only with the skin, and can be felt readily. If perfectly solid you may know the trouble. Foment with hot water in cold weather and cold water in hot water. Apply as constantly as possible, wrap in woolen cloths saturated with water between the time

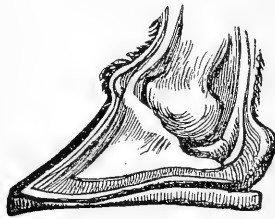


DIAGRAM OF FOOT

Showing position of wing of Coffin bone, often badly bruised and sometimes fractured.

of bathing. When the soreness has left and lameness ceases apply Leithhead's Blister Salve over the spot. This will absorb all inflammation. After once thoroughly hardened all lameness leaves, but there will be a clumsy, stiff action due to a want of elasticity.



OUR GUARANTEE
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1902

A Sure Ringworm Cure—Leithhead's Phenyle.

Diseases of the Legs.

THOROUGHPIN.

Apply a cooling lotion. Bathe the part with hot water, give absolute rest, apply Leith-



ENLARGEMENT forming thoroughpin.



DIAGRAM SHOWING dissection of thoroughpin and bog spavin; also the junction of these two affections.

head's Liquid Blister. In a case of a young colt getting thoroughpin shorten his allowance of feed a little for a couple of months.

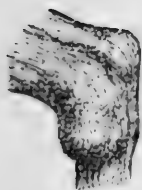
BLOOD SPAVIN.

Upon examination with the hand, the enlargement will be found to be soft and readily rubbed down, which should be often done. This treatment is the only one of any virtue.

BONE SPAVIN.

Bone spavin is a disease of the hock joint. Inflammation is first seen, effusion following, which if not treated for at once will ossify this joint and a permanent spavin will result.

The disease is not curable. The lameness



BONE SPAVIN showing the long tumor on the inner side of the hock joint.



POSITION OF A foot that cannot be raised from the ground by reason of spavin.

is. If taken before any effusion is thrown out, the disease can be cured. After effusion is thrown out and ossification has begun,

Leithhead's Liquid Blister will relieve all



Position of a healthy foot raised from the ground in an easy trot. lameness. This treatment should be followed



FEELING FOR A SPAVIN.

with rest. Leithhead's Liquid Blister is better than all so-called spavin cures.

OCCULT SPAVIN.

When it is satisfactorily located give it the same treatment as for bone spavin.

Occult spavin is similar to bone spavin, except there is no enlargement. The lameness is severe

BOG SPAVIN.

Bathe it continuously with either hot or cold water for twelve hours, then apply an

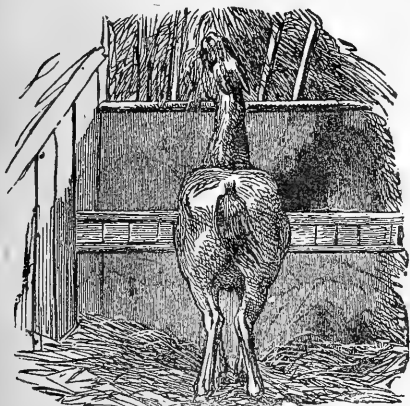


HOCK JOINT SHOWING THE ENLARGMENT OF THE BOG SPAVIN.

oil-meal poultice hot and soft. Continue for several days, changing once a day and bathing with hot water at the time of changing. When the soreness and lameness are gone, apply Leithhead's Liquid Blister.

CURB.

Curb is an enlargement on the back of the hock. Bathe the part with hot water for half an hour at a time three or four times a day.



SICKLE OR COW HOCKS.

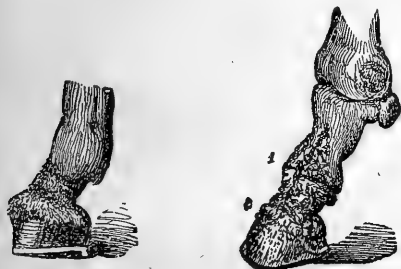
most liable to curb.

Raise the heel an inch; continue this treatment till all soreness is gone, about a week or ten days, then apply Leithhead's Blister Salve.

RING BONE.

Ringbone is the bony enlargement on the pastern.

In the first stage apply hot baths, three



Foot of a horse affected with ringbone. The pastern joints being entirely stiffened.

Diagram showing pastern and pedal bone of horse affected with severe ringbone.

or four times a day till all active inflamma-

tion is gone, then blister with Leithhead's Blister Salve.

SPRAIN OF BACK TENDONS OF THE FORELEGS.

This trouble is very common. Shoe so as to raise the heels an inch. Apply hot water to the part till soreness is gone. After doing this apply Leithhead's White Liniment. Bandage as tight as the soreness will allow, and with a dry cotton or linen bandage. Do this after applying the liniment.

BROKEN DOWN.

Broken down is the rupture of the suspensory ligaments. In cases of break down it is mercy to kill the animal. If not to be saved for breeding purposes. The same treatment is to be used as for sprain of the back tendons.

SPLINT.

Splint is an enlargement of cannon bone just below the knee.

If noticed when the injury first occurs apply hot or cold water till the soreness is



DIAGRAM SHOWING the different locations of splints. 1. High splint near the knee. 2. Low splint far below the knee. 3. Bog tumor, often mis-called a splint.

SPLINTS OF A SERIOUS KIND.

1. Splints involving the knee joint. 2. Splint interfering with the back tendons. 3. Small splint under the tendon of the extensor muscle

nearly gone, then apply Leithhead's Blister Salve. Give a couple of week's rest. Feed on light, soft food while idle.

CAPPED HOCK AND ELBOW.

Is a swelling like a tumor; filled with a watery fluid tinged with blood. Empty and treat to prevent a calloused fibrous mass. Give one and a half to two pints of raw linseed oil. Bathe the parts with salted hot water. Continue for an hour and dry. Then use Leithhead's White Liniment. Often it is



HOCK.



AN UNUSUALLY LARGE capped hock.

advisable to tap it with a knife and let the water out. Make the opening large enough to let the finger in. Syringe out with warm water and bathe with a phenyle solution, tablespoonful to the pint. Repeat twice a day. Continue the external treatment as before. Give internally Leithhead's Condition Powders in the feed. This is to remove.

FRACTURES.

Veterinarian must be had. Leithhead's Fever Remedy is good for the fever.

OPEN JOINTS.

Often fatal. Irritation fever causes death. The best of care and treatment must be given. Wash the wound with diluted phenyle. Deep wounds full of pus need to be syringed out with a stronger solution (teaspoon to the pint.) Water must be tepid. Be gentle. Fill the washed wound with the following:

Glycerine, two, teaspoons; Phenyle, one teaspoon; Flour to make a thick paste.

Make a plug of the paste and insert it in the wound, then smear over the hard portion of the wound S. E. Belladonna (as bought of the druggist) covering with a cold poultice of oil cake. Change twice a day. This poultice is to be continued till the flow of pus ceases and a clear secretion only remains. Then omit the plug and use the poultice applied in contact with the wound. Keep the horse from motion. Give Leithhead's Condition Powders as a tonic from the beginning.

BROKEN KNEES.

Laceration of the soft parts, not the bones. Remove any foreign matter as sand or other substance and gently bathe the part. Wet the wound with Leithhead's White Liniment. Bind the skin with soft linen. Keep the air out. Splints are sometimes necessary. In case there is fever, use Leithhead's Fever Remedy.

KNEE SPRUNG.

Nothing can be done except to use Leithhead's Blister in recent cases.

COCKED ANKLES.

Find the cause. Remove it.

WIND GALLS.

Make frequent applications of cold water. After a couple of days apply Leithhead's Li-



WINDGALLS SHOWING situations and forms of windgalls.



WINDGALLS AS THEY appear upon dissection.

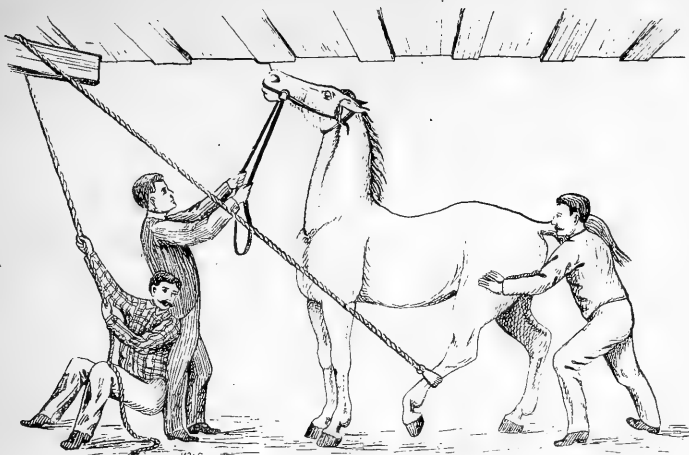
quid Blister, repeating at intervals till cured.

SWEENEY.

Foment with hot water (never cold) for half an hour three times a day. Use a handful of salt to the pail of hot water. In light cases Leithhead's White Liniment will cure if following this water treatment. In severe cases use Leithhead's Liquid Blister. Give the horse absolute rest.

CRAMP.

Cramp of the muscles of the back very often occurs in hard worked horses. Often thought to be stifle. Apply hot water quickly and continue until the muscle relaxes so as to allow the horse to walk. Then rub dry and use Leithhead's white Liniment, apply with friction.



ARRANGEMENT FOR USE WITH STIFLED HORSE.

STIFLED LEGS.

If dislocated tie a rope to the pastern, pull with this rope forward and outward. The man handling the rope to stand about a yard to the forward of the horse's shoulder. Another man standing near the stifle pushes it in place. You can hear it snap as it returns to place. Use shoes to raise the heels two inches. Bathe the stifle quite frequent to cool it. When the inflammation is gone use Leithhead's Blister around the joint. Give a long rest.

STOCKING.

A name given to swelling of the legs. Reduce the swelling with exercise. After work bandage with cotton bandage in summer, flannel in winter. Cool the legs in summer with cold water bath. Give Leithhead's Condition Powders constantly till cured.

HIP LAMENESS.

The bones can not be reached to replace so the treatment is to allow nature to be assisted with but the application of Leithhead's White Liniment. Allow the horse to rest some months.

GREASE.

Purge the horse with an aloes ball as the druggist will make for you. Follow with Leithhead's Condition Powder for the blood.



FIRST SYMPTOM OF GREASE
scratching one leg with the other foot.

Apply hot poultices. Sprinkle powdered charcoal over the top of the poultice. Change once a day. After the inflammation is gone



FIRST STAGE OF CONFIRMED GREASE. EXUDATION.
drop the poultice and apply Leithhead's White



SECOND STAGE
of confirmed grease cracks.



GRAPES.
The stage of grease in which horny lumps are seen, called grapes.

Liniment three times a day. Burn proud flesh with alum, should it appear.

SCRATCHES OR CRACKED HEELS.

Clean them with a brush. Do not use water. If the horse comes in wet dry by bandaging with flannel t'll dry. When clean apply



CRACKED HEEL.

Leithhead's Carbo-Zinc Salve. If proud flesh

burn with alum. Use Leithhead's Condition Powder for a constant treatment for the blood.

MUD FEVER.

A fever of the skin of the legs.

Clean with a warm bath. Apply to the cleaned surface Leithhead's White Liniment. After the swelling leaves apply fresh lard to the skin once a day, rub in well. Use Leithhead's Condition Powders to purify the blood. Mud fever neglected runs to carbuncle.

CARBUNCLE.

Similar to a bad boil.

Have your druggist make you aloe balls. Give these to regulate the bowels. Give Leithhead's Fever Cure at once and continue till the bowels are in good condition. Keep the sore clean with a solution of phenyle (1-40). Apply a hot soft linseed poultice to the part twice a day until the sore begins to granulate. Then omit and use Leithhead's White Liniment as a dressing three times a day, washing it often to keep clean. This keeps from proud flesh.

DISLOCATIONS.

A bath of hot water three times a day to be followed with an application of Leithhead's White Liniment to which has been added 1-3 its volume of Laudanum. Apply with a tight bandage.

SORE SHINS.

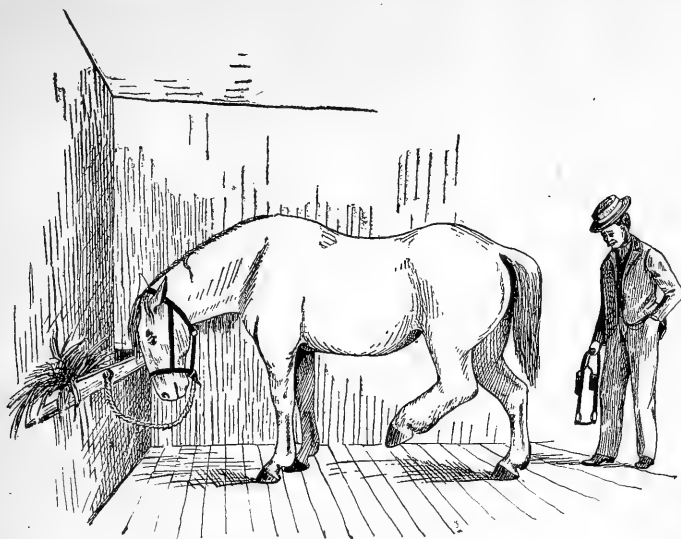
May cause lameness. Give rest to the animal. Remove the shoes. Hot water applications three times a day to be followed with an application of Leithhead's White Liniment to which has been added 1-3 its volume of Laudanum. Continue till soreness is gone. Then, if necessary, use Leithhead's Blister for the purpose of reducing the size.

INTERFERING.

Apply a boot on the leg that is brushed. A good blacksmith can be of service. For swelling use Leithhead's White Liniment after hot water applications have been applied and dried.

RUPTURE OF MUSCLES.

Hot water applications as often as possible. Leithhead's White Liniment to be applied between the hot water applications. To liniment add 1-3 its volume of laudanum. When inflammation has left use Leithhead's Blister to re-develop the shrunken muscles. Continue with sufficient exercise to keep the muscle in health.



HORSE WITH WEED OR ELEPHANT LEG.

WEED.

A blood disease. Appearing as a swelling to the legs. Use a ball of Aloes to make bowel action when sluggish. Leithhead's White Liniment to reduce the inflammation on the

legs. Leithhead's Fever Cure when fevered. Leithhead's Condition Powders to be the blood purifier. Frequent hot water baths to the inflammation is of much importance if followed with the application of the liniment.

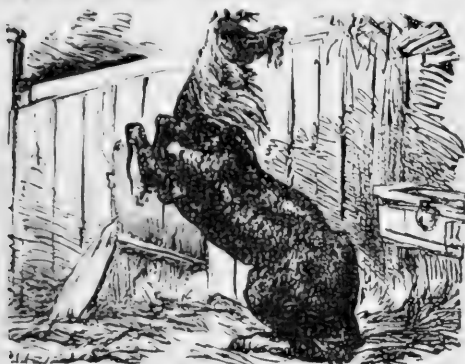


OUR GUARANTEE
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Diseases of the Body.

GASTRITIS.

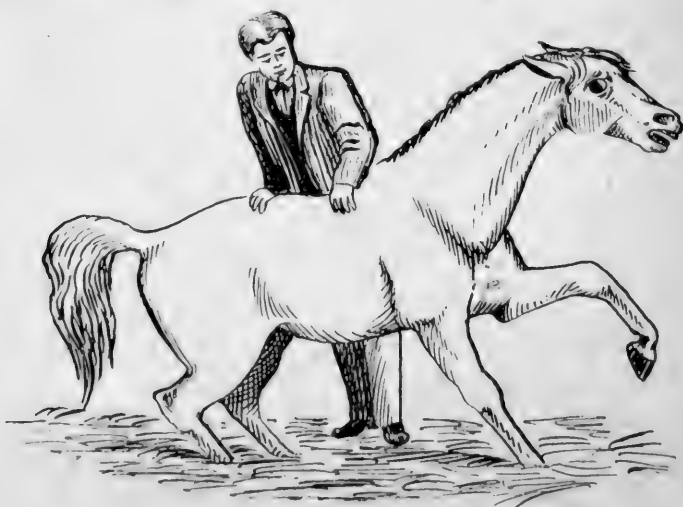
An inflammation of the stomach, caused by over-eating. As it often leads to founder, we very seldom have a chance to treat it.



Horse suffering with Gastritis.

SPRAIN OF THE BACK.

If not broken, will be cured by using Leithhead's Blister Salve, after clipping off the hair along the back. Rub well in and oil once a day afterwards. Repeat after two weeks.



TEST FOR SPRAIN OF THE BACK.

HYPERTROPHY OF THE LIVER.

Due to heavy feed and idleness. Can only be helped by reducing the flesh of the animal.



CHRONIC GASTRITIS.

A horse quenching the thirst of chronic gastritis.

PHARYNGITIS.

Known by painful swallowing. Water returns by the nose when drinking. Food is quitted. Throat and glands enlarged on the outside.

Examine the throat for foreign substance. Apply Leithhead's Liquid Blister to the outside. Give internally Leithhead's Fever Remedy. Feed on soft feed. If it continues long give oatmeal gruel injections.

TEETH ACHE, DECAY, WOLF TEETH.

See that a horse dentist is had.

CARIES OR BONE ULCERATION.

This trouble, coming from injury of the bit, from poll evil, from withers, from docking, affecting any bone. It is known by the offensive smell of bone decay.

Wash the part. Making an opening, if possible, to allow the pus to escape, scrape the bone part diseased with a dull edge, and dress twice a day with a solution of two teaspoonsful of muriatic acid to a cup of water, apply with a swab to the bone where diseased. Continue till all disease is gone, then apply Leithhead's White Liniment to heal the flesh wound.

SUNSTROKE.

If a horse suddenly stops sweating and dries off, look out for sunstroke. In cases of sunstroke, use cold water on the head freely. Give whiskey in two ounce doses every half hour.

If it leaves the animal weak in the gait, blister the back with Leithhead's Liquid Blister.

FRACTURE OF THE SKULL.

Is always shown by works of violence.

Have that part of the bone that is pressed in removed. Keep clean and use Leithhead's White Liniment to hasten the healing process.

Leithhead's Pink Eye & FEVER CURE should be used in case fever arises. Apply ice poultices to the head for several days and nights.

Always fatal if fever arises so as to cause delirium.

PNEUMONIA.

This is inflammation of the lung tissue, and is often brought on from Bronchitis, through neglect.

In second stage the lungs become solid,

the breath becomes shallow, the animal suffocates for want of oxygen, and dies. Treat the same as for Bronchitis.

RABIES OR HYDROPHOBIA.

This disease is inoculated by a bite. It is always in saliva and blood, but not in the milk. It generally starts from a dog bite. The time between inoculation and the appearance often delays as long as 90 days. There is no treatment that is beneficial. The disease is easily distinguished by the appearance of the horse.

GLANDERS.

A running at the nose with a grayish purple color to the lining. The discharge looks like melted butter. The jaw will swell. A veterinary judgement is necessary before the animal is to be killed.

This disease is contagious to horse and man, and the price of an animal should not prevent his death to stop contagion.

RHEUMATISM.

Lameness flying from one point to another.

Use Leithhead's White Liniment as a rub down on the leg after bathing them in hot water, and bandage warmly with flannel. After acute symptoms have left, walk the animal.

APOPLEXY.

Caused by rushing blood to the brain. Always remove harness; dash cold water over the head.

ATROPHY OF THE HEART.

Pulse often misses two or three beats. Death is liable to be sudden, due to clots that form in the heart and blood vessels.

Give Leithhead's Condition Powders with 1 drachm of nux vomica to each dose.

BROKEN RIBS.

Use surcingle to bandage on; keep the ribs from working. Then watch developments. If fever arises, use Leithhead's Fever Cure, and feed on soft feed.

BIG HEAD.

Very rare—never cured.

BONY TUMOR.

Mostly seen on lower jaw

Cannot be cured, if already formed. If, while forming, its nature is known, Leithhead's Blister Salve will do much good.

HERNIA OR RUPTURE.

Requires a veterinarian.

WARTS.

Burn off with Nitric acid and grease.

ITCHY TAIL.

Often caused by worms; treat with Leithhead's Worm Powders.

Often Surfelt or Pimples, treat as for surfeit. Often mange or parasite, treat with Leithhead's Phenyle, as directed for mange.

ITCHY SKIN.

If not due to mange or hen lice, (if so treat with Leithhead's Phenyle) you may know it is one form of surfeit. Give the horse a good soap and water bath, and then dry sponge with vinegar. Give an Aloes ball as prepared by the druggist, and follow with Leithhead's Stock Food.

MELANOSIS.

Considered a specie of cancer.

Black tumors form under the skin, large pus cavities follow. Cause lies in the blood.

Give a tablespoonful of the following mixture morning and night in bran mash; continue for three weeks, then omit two weeks and repeat:

Two ounces Iodide Potash.

One pint water.

Give Leithhead's Stock Food continuously for one month.

When these tumors form first, they may be cut with safety. Use Leithhead's White Liniment to heal such cuts.

INFLAMED JUGULAR VEIN.

Vein is sore, swollen and hot.

In chronic stages the vein will be hard.

Bleed the vein. Watch it; if the blood coagulates and the vein swells, bathe with warm water, and work to break down the clot. This clot would be liable to obliterate the vein, which if once done, can never be

remedied. If abscesses form apply Leithhead's Liquid Blister, after removing the



INFLAMED JUGULAR VEIN.

Position of a horse with inflammation of the jugular vein.

pin. If sacks of water form, open them and wash out with Leithhead's Liquid Phenyle;



INFLAMED JUGULAR VEIN.

Appearance of the jugular vein when abscesses have formed

use alum to burn proud flesh, if it appears.

SADDLE AND OTHER GALLS.

Use Leithhead's Gall Cure, according to the full directions.

HIDE BOUND.

Easily known by tight skin. Give Leithhead's Condition Powders.

BLINDNESS FROM PARALYSIS.

As the eye does not itself appear any different than in health, the person must necessarily watch the action of the horse closely. It may effect one or both eyes, and the horse will betray his trouble by his step, and the moving of his ears backward and forward. Cure is rarely to be hoped for, but help may be had by using Leithhead's Blister Salve to the cheek or temple and back of the neck, and give internally Leithhead's Condition Powders.

FISTULOUS WITHERS.

Watch, by the odor, if the bone is effected.



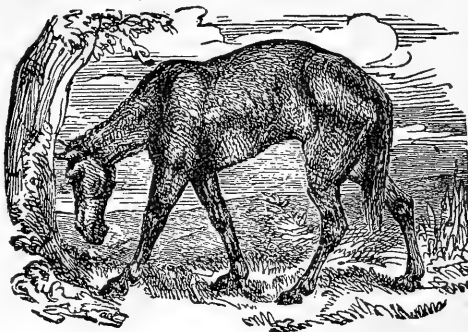
SLIGHT ENLARGEMENT WHICH
may end in fistulous withers.

Treat as for Caries. Use Leithhead's White

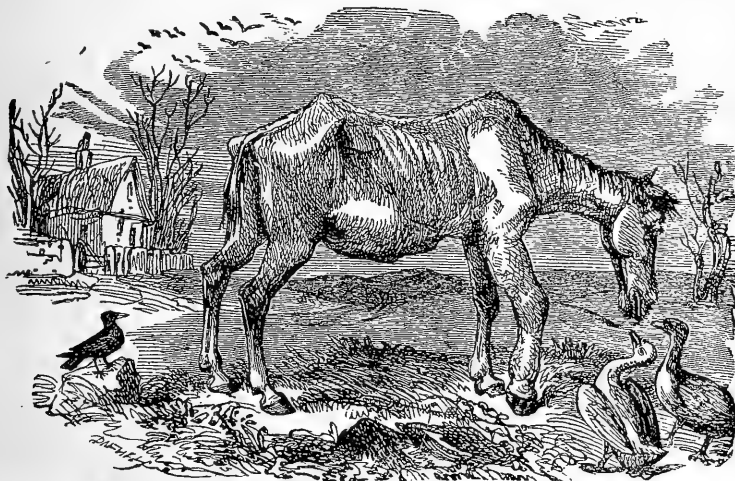
to find the bone. Always open cautiously
but freely, always lengthwise of the horse.
A veterinarian is best.

BLOODY URINE.

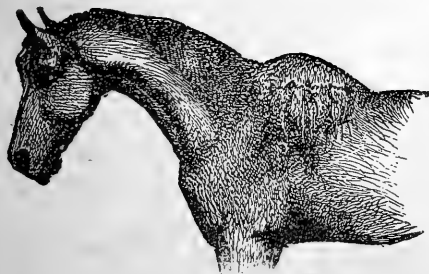
See cut for general appearance of the ani-



HORSE SUFFERING FROM BLOODY URINE.



CROW-BATE—EFFECT OF DROPSY.



FISTULOUS WITHERS—WORST STAGE.

Liniment to the open sore made by opening

mal suffering from this trouble. There is only
one treatment that will seem to help this, and
that is a general system builder, such as
Leithhead's Stock Food.

DROPSY.

Is not a disease. A result of a disease
known by swelling legs, languor, pale mu-
cous linings, indifference to food. Remove
the cause. It may be the teeth or a debili-
tated state due to some functions' inactivity.

Feed to bring back the appetite and give
Leithhead's Condition Powders for several
weeks, or till well.

A SURE MEDICINE. LEITHHEAD'S WORM POWDERS.

POLL-EVIL.

Starts from a bruise on the head. Look



POLL-EVIL DURING THE FIRST STAGE.

for bone trouble by opening the way of the muscle. If the bone is affected, treat as



POLL-EVIL IN ITS SECOND STAGE.

spoken of for caries; if not, use Leithhead's White Liniment till well. Watch for proud flesh and keep down with bluestone. Feed Leithhead's Condition Powders for improved general health

GOITRE.

An enlargement on the under side of neck, (5 to 8 inches) below the angle, very hard. Wash clean and apply an ointment your



GOITRE, OR BRONCHOCOELE
druggist will make of 2 drachms Iodide Potash to 2 oz. Lard; rub this ointment well in. Continue for four weeks.

ECZEMA.

A pimply condition of the skin. Treatment is unnecessary further than Leithhead's Condition Powders and shelter.

INFLAMED PAROTID GLAND.

Known by being as large as medium-sized hand, back of the angle of both sides of the throat.

Bathe in hot water and apply poultice. Give Leithhead's "Pink Eye & FEVER CURE" to stop the feverish condition. If the gland breaks, open it well and apply poultices. Use Leithhead's White Liniment to heal.

BRONCHITIS.

The animal shivers, showing a chill as the first symptom of this trouble. If seen, people think nothing of such. The chill passes off, fever follows. The horse coughs. This irritation of the passage is liable to spread to the lungs and death often follows.

Give Leithhead's Fever Remedy at the first sign of chill, and continue. Allow water at pleasure. Feed scalded oats. Blister the sides of lungs and chest with Leithhead's Liquid Blister.

After a change for the better is well observed and the fever gone, give Leithhead's Condition Powders.

CHOKING.

Give the horse a couple of swallows linseed



CHOKING.

A horse trying to raise the food stuck in the throat from stricture of the gullet.

oil and manipulate the lump; work it out lit-

tle at time. If this fails, use the probang. Only have the probang in one minute at a time, as it prevents the horse from breath-



Two forms of probang. The piece of sponge is more preferable than the one with a brush.

ing. If this fails, make an opening large enough to get the hand in, but as small as possible, using care not to wound the jugular vein. Then sew together, after the trouble is over, and heal with Leithhead's White Liniment.

TUMOR IN THE FALSE NOSTRIL.

Known by wheezing in the breathing, caused by the diminished air passage. It is an abscess, and can be opened without any danger. After opening, treat with Leithhead's White Liniment to heal up the flesh wound.

CHRONIC COUGH.

Almost incurable; benefited with the use of Leithhead's Liquid Blister to the throat.

POLYPUS.

Cut it out. It may grow again but not often. A tumor like substance in the nose.

INFLAMMATION OF THE BLADDER.

This trouble comes from too frequent use of fly blister and diuretic medicines. Is something similar to the inflammation of the kidneys. There is only one way to help the animal, and that is to stop the medicine that is making the trouble. Give large doses of flaxseed tea and use linseed oil in pint doses for laxative.

SURFEIT OR PIMPLES.

Due to fat, rich blood and lazy liver and kidneys. These pimples, sometimes scab. Give the horse an Aloes ball, as prepared by your druggist. Feed on bran mash for a couple of days and give a 50c package of Leithhead's Stock Food. No local treatment is necessary, except to groom as much as possible.

SPASM OF THE NECK OF THE BLADDER.

Usually known by a great straining with little results. A warm medicine or Leithhead's colic cure is all that is necessary with proper feed treatment. This has a heating effect, and allows the muscles to relax.

PARALYSIS OF THE BLADDER.

This is due to some such disease as lockjaw, rheumatism, etc., and must necessarily be treated under the head that is the cause.

DIABETES.

This probably comes from excessive use of nitre and other diuretics. It occasions much thirst. The horse will drink great quantities of water quite often. Emaciation and hide-bound will follow this trouble. The animal will lick the walls and mortar to get the lime. Generally weak with palpitation of the heart.

Give the animal Leithhead's Condition Powders with the feed, and also give a dose of 1 drachm iodine mixed with $\frac{1}{2}$ drachm iodine of potash and linseed meal. Give three times a day, and then follow with teaspoonful of bicarbonate of soda. A complete change of food will be beneficial. Better still is to allow the animal to run at large where grass is possible.

ABCESSES.

An abscess is a gathering of pus in any part of the body.

The cause is a bad condition of the blood, and the unhealthy condition of the organs to purify the blood. The start of an abscess in a certain place is often from a bruise.

The blood must be purified by using Leith-



Position of the head with ABCESS OF THE BRAIN

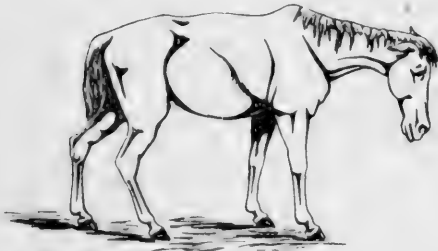
head's Condition Powders. Poultice the abscess to bring the abscess to a head, then tap it. Clear out the sac and use a solution of Leithhead's Phenyle to cleanse.

"All Fevered Conditions," use Leithhead's Pink Eye and Fever Cure.

FLATULENT COLIC.

Weak digestion causes the food to lay and decompose in the stomach. The horse bloats up even to rupture the stomach.

Give Leithhead's Colic Cure, also injections of soap water (warm), but be careful to not rupture the extended intestine while injecting. Bind hot water rags on the belly; keep them hot.



HORSE DYING FROM FLATULENT COLIC.

If the trouble does not yield, if it has been too long before the treatment reaches the animal, to puncture and let the gas off, is successful by one who knows how. In cases where treatment has not been soon enough the stomach is ruptured and the animal is sure to die in an hour or so.

CONSTIPATION.

Use injections and Barb Aloes in ball (as prepared by your druggist), follow with Leithhead's Condition Powders to prevent a re-occurrence.

CALCULI.

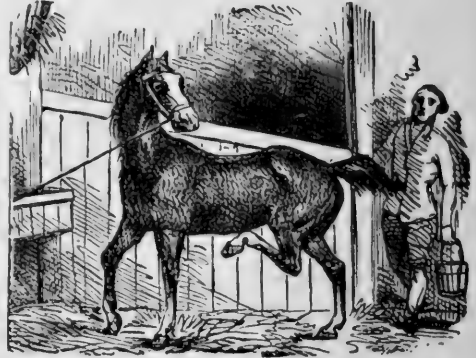
Not very common; a veterinarian needed.

RUPTURE OF THE BLADDER.

Nothing can be done.

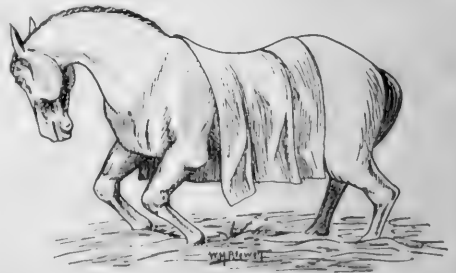
SPASMODIC COLIC.

A violent spasmodic cramp of the muscular coat of the bowel. Give Leithhead's Colic Cure immediately at first sign. When pos-



THE FIRST STAGE OF SPASMODIC COLIC.

sible give warm water soap injections. Have the horse in a roomy place. Feed on soft feed. Give friction to abdomen, and blanket



SECOND STAGE OF SPASMODIC COLIC.

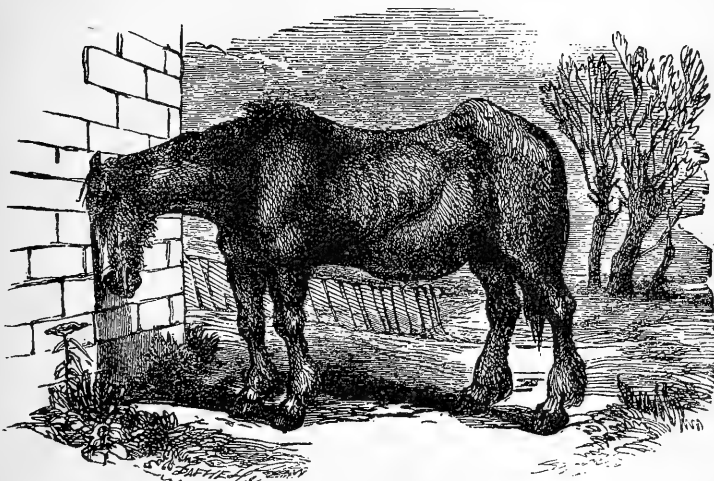
the animal. After the worst pain leaves, walking the animal is beneficial. If this does not effect a cure refer for treatment to enteritis—it has run to this trouble.

STOMACH STAGGERS.

A stupid condition from over-eating.
Give a $\frac{3}{4}$ dose of Barb Aloes in one pint Raw Oil. Feed on bulky food to avoid a recurrence.

ten hours. Give Leithhead's Fever Remedy continuously. If the abdomen fills with water it may be tapped by a veterinarian.

Give linseed oil, 1 pint with tr. nux vomica, one tablespoonful internally. Use Leithhead's Liquid Blister externally to the belly.



A HORSE SUFFERING WITH STOMACH OR SLEEPY STAGGERS.

ENTERITIS.

Inflammation of mucous lining of the bowel.

Similar to colic to a new observer; to be distinguished by being constant (colic intermittent). The horse lays down carefully, instead of throwing himself down. Treatment of genuine enteritis is of very little use. After you are satisfied the trouble is not colic give one pint of raw linseed oil, with two tablespoonsful of nux vomica, blister lightly with Leithhead's Liquid Blister. Give Leithhead's Fever Remedy constantly in addition to the other treatment; also give injections of soap and water.

PERITONITIS.

Inflammation of the outer covering of the bowel. It may last a week or may kill in

GUT TIE.

Give linseed oil, one pint, with two tablespoonsful of nux vomica. Hot water injections, hot water rags to belly. Give Leithhead's Colic Cure in half hour, if necessary. If relief is not had, death results from strangulation.

DYSENTERY.

Or neglected diarrhoea.

Give injections of starch and water with two tablespoonsful of Laudanum in each injection. If this does not seem to effect relief give a pint of raw oil also.

DYSPEPSIA.

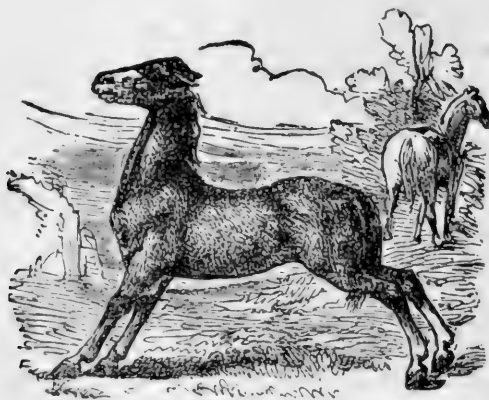
Rather uncommon. Shown by an unthrifty appearance, coat rough, hide bound. Examine the teeth and feed on Leithhead's Stock Food.

LEITHHEAD'S CONDITION POWDER SILKENS the HAIR with GLOSS.

CONGESTION OF THE KIDNEYS.

This is a trouble which affects the blood and is constitutional. The kidney symptoms are more noticeable, and for this reason it is considered a kidney disease. The real trouble is that the blood is so full of fat that the kidneys are clogged up from doing their usual duties. The animal does not need to be fat to find too much fat in the blood, as this fat in the blood may not be sufficiently digested to be disposed as fat for body.

Our illustration will give you the position of the animal suffering from this trouble.



HORSES WITH CONGESTION OF THE KIDNEYS

This position is enough to tell the whole story, and no other symptoms are necessary.

Give the animal Barbadoes aloes ball, as your druggist may make it for you. Frequent warm water injections and apply hot rags to the loins. The usual method is to starve the animal for a couple of days, and allow him to drink nothing but flaxseed tea.

In case of fever arising give Leithhead's Fever Remedy. It is very necessary to watch these symptoms, and treat it faithfully. In case of retention of the urine, assist the animal to draw it off.

CHORDES.

Stiffness of neck, drawing it to one side. Stiffness spreads to all parts of the body. Apply hot water bags to the muscles. Keep in a warm place. Give 40 drops F. E. Colchicum Seed, (at your druggist), three times a day, and begin giving Leithhead's Condition Powders at once, and continue till well. Gentle exercise.

ROARING OR WHISTLING.

Commonly sore throat.

Feed on bran mash and boiled oats. Give Leithhead's Fever Remedy, allowing the animal access to cold water at any moment to cool his throat. If this treatment does not seem to be helping fast enough, apply hot poultices to the throat; pay no attention to the appetite, it will return.

In case of roaring, slightly blister the throat with Leithhead's Liquid Blister. Roaring of long standing is incurable.

PLEURISY.

The pleura is the membrane lining the lung wall, so moistened by its own secretion to allow a movement of the lungs in breathing, without friction.

This lining inflamed is pleurisy. It is often fatal. During a chill blanket the animal. Give Leithhead's Fever Remedy in whiskey. A light application of Leithhead's Liquid Blister to the sides. Feed lightly; allow access to water. When fever leaves, give Leithhead's Condition Powders.

CONGESTION OF THE LUNGS.

A forerunner to Pneumonia. If properly cared for and without delay, the trouble will disappear. Give Leithhead's Fever Remedy till the breathing and circulation is normal. If it does not yield to this, follow treatment as if for pneumonia.

HYDROTHORAX.

The filling of the chest with water following pleurisy. If the sides have not already been blistered, see that Leithhead's Liquid Blister is used. Give Leithhead's Fever Rem-



HORSE WITH HYDROTHORAX

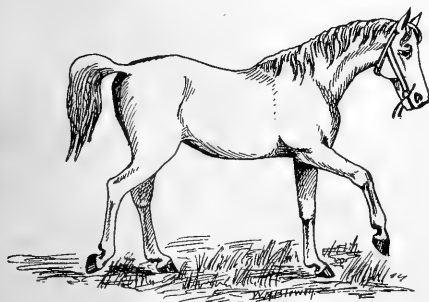
Showing distension of the nostrils and heaving of the flank.

edy. If he does not eat, force oat meal gruel. If it continues to fill, it will be found necessary to tap, to take the watery fluid away. Follow with Leithhead's Condition Powders.

Always have a veterinarian.

PARALYSIS.

Use Leithhead's Liquid Blister along the spine, or if the face, at the base of the brain.

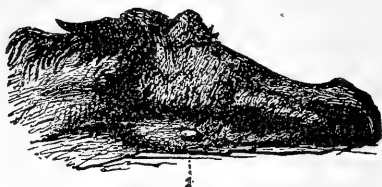


UNSTEADY GAIT OF A HORSE WITH partial paralysis.

Give Leithhead's Condition Powders internally. If abscess of the brain, nearly always fatal.

CATARRH.

The first stage should be looked after to prevent its running into the chronic called nasal gleet. The main thing to do is to remove the cause by sheltering the animal.



SYMPATHETIC GLAND OF THROAT SWOLLEN

Fever is always present, and Leithhead's Fever Remedy should be used. This fever remedy will give the animal more appetite.



A HORSE WITH THE THROAT BLISTERED.

Bad cases demand rest for the animal. In prolonged attacks, give Leithhead's Condition Powder for its affect, and syringe out



NOSE-BAG FOR STEAMING HORSE WITH COLD. the nostrils with Leithhead's Phenyle solution (2 teaspoonsful to a pint of water); use Leithhead's Liquid Blister on the throat lightly.

To steam the head with hot bran as cut shows, is always beneficial.

All Worms Destroyed—Sure—Leithhead's Worm Powders.

NASAL GLEET.

Chronic form of catarrh. Does not harm the general health of the animal. Disables for use on account of the looks of the running nostril. Give Leithhead's Condition Powders.



NASAL GLEET.

Horse affected with nasal gleet and bulging of the frontal sinus.

Wash out the nostrils with Leithhead's Phenyle solution, two teaspoonsful to the pint of water, and if very severe, so as to have a bulging of the bone in the head, an operation of trephining will be necessary.

MEGRIMS.

A milder form of apoplexy.



EXPRESSION CHARACTERISTIC OF MEGRIMS.

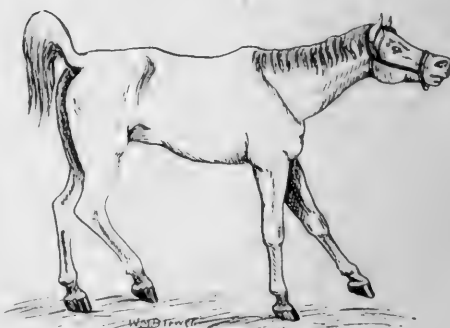
It is a pet hobby to bleed the horse—much better to throw cold water on the head and wait his recovery, which will be soon.

LOCKJAW OR TETANUS.

Often caused by worms and occurs usually from over heating. The prick of a nail will often set or lock the jaw as in lock jaw. Needs a veterinarian.



THE TEST FOR TETANUS.



SHOWING HOW FAR AN ANIMAL WITH TETANUS is capable of going

CONGESTION OF THE LIVER.

Known by offensive smell to both fœces and mouth, and grinding of the teeth. Sometimes lameness to the right fore-shoulder; also some fever. Colicky pains, head always turns towards the right side. If the animal's liver is over-fat, bleeding will be to an advantage. Feed with Leithhead's Condition Powders. Make the food light. Purge the bowels with aloes balls as prepared by the druggist. There is often complication of influenza following this trouble, and in such cases follow the instructions under this trouble.

INFLAMMATION OF THE EYE.

The inflammation of the mucous membrane is called conjunctiva. It is usually due to some foreign substance in the eye. Quite often it is a symptom of other disease, such as pink eye, etc., wherever fever is present in disease. The eye generally is kept partly closed, tears flow, and the eyelids are swollen. The inner lining of the eye is red and inflamed. Make a careful examination and remove any foreign body that might be present, after this is removed, if it be present, bathe the eye with warm water with a little salt in it, say a teaspoonful to a pint two or three times a day, using a sponge to dry and clean the eye after each time. Flaxseed under the lid will often be useful to get foreign matter out. To prevent inflammation extending to the inner parts of the eye apply with a camel's hair brush around and under the eyelid and upon the ball a solution of Atropin sulphate 2 grains, water 1 ounce. Repeat six times a day, and keep the animal in a dark stall.

IRITIS.

This is the inflammation of that portion of the eye which gives it its color, is called iritis. It is due to exposure. It may be known by a pink ring formed around the white portion of the eye. The pupil will be very small, and the aqueous becomes turbid, with white flakes floating in it, possibly white pus at the bottom.

Treat the eye with a bath of warm water as much as possible. Apply a lotion made of Atropin sulphate two grains, water one ounce, every few minutes for twenty or thirty minutes; then rest five hours, and repeat it. After this treatment cover the face with a green cloth, and keep the animal in a dark stall. Feed on unstimulating food. Keep the bowels in good condition. Give an aloe ball as prepared by your druggist, when found necessary for the bowels. This treatment to be continued until inflammation has gone.

TORN EYELIDS.

Sew them up at once, and dress two or three times a day with a solution made of Leithhead's Phenyle according to the directions on the bottle two teaspoonsful to a pint of water. Keep the horse tied, so that he will not lacerate its eyelid any more by rubbing its head.

INFLAMMATION OF THE TESTICLES.

Give an aloes ball as made by your druggist to move the bowels. Allow rest from male service for a week or longer. Spread over it hot fomentations. If it should go on to suppuration open and inject a solution of Leithhead's Phenyle. If it becomes hardened, substitute a lotion made of 1 drachm iodine 1 drachm potassium iodide, to $\frac{1}{2}$ pint water. Inject a tablespoonful into the organ twice a day, and apply on the outside. If this fails, castrate.

JAUNDICE, OR YELLOWS.

This can be usually seen by the yellow appearance of the skin, and especially of the eyes. It is caused by an obstruction of the gall duct which allows the bile to be thrown back in the system. Give aloes ball (as prepared by your druggist to move the bowels, follow with Leithhead's Stock Food for some time with as much a change in the food as possible, will be all the treatment necessary, unless complications set in, in such event, treat under separate head.

OBSTRUCTION OF THE LACHRYMAL DUCT.

This is the duct that carries off the tears. It runs from the inner corner of the eyelid to the nose, and empties in the nasal passage. It may be stopped up from catarrh or some mechanical obstruction.

The obstruction should be taken out, and treated by a veterinarian.

MOON BLINDNESS.

There is no treatment for this trouble that is an absolute cure. It is hereditary, and for this reason it should be understood that an animal suffering from this trouble should not be bred. Known by the swelling of the whole eye and loss of sight.

INFLAMMATION OF THE LIVER.

Usually found in old horses. It often leads to abscesses, or hardening and softening of the organ. There is not much to do in this trouble, but try and build up the system with a change of food, and use Leithhead's Stock Food for some time.

Known by loss of appetite, dullness of the eye, horse remains standing hanging its head. Manure, darkish red brown and small balls. Urine, scanty and high colored.

WORMS OF ALL KINDS.

There is no need to distinguish one kind from another, as Leithhead's Worm Powders are certain specific for any of the troubles. They are usually known to be present when the animal turns up his upper lip, as if nauseated, and rubs his lips against the wall and manger, rubbing and switching of his tail, and otherwise showing irritation. It is betrayed by his appetite, making it ravenous. It gives his hair a coarse, dry appearance. If the treatment as given on the package of Leithhead's Worm Powders is followed strictly, it will be sure to rid the animal of this trouble. Do not think that a condition powder or stock food, or some simple medicine of this kind will do. You must have a medicine especially prepared for this trouble, and the best is not too good, for this reason do not allow substitution.



APPEARANCE OF A COLT SUFFERING FROM WORMS.



HORSE RUBBING HIS NOSE AGAINST A WALL—
a symptom of worms.



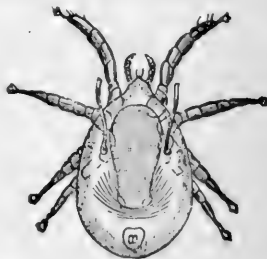
RINGWORM.

Ringworm is a vegetable fungoid growth. The scurvy skin of ringworm is easily recognized.

The scale will look similar to bran. Wash with warm water and soap, and apply Leithhead's Phenyle to kill the parasite.

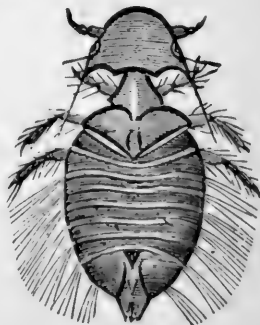
LICE.

A wingless blood sucker parasite.



HEN LOUSE, OR DERMANYSSUS OF THE HORSE.

The two illustrations of lice that infest domestic animals.

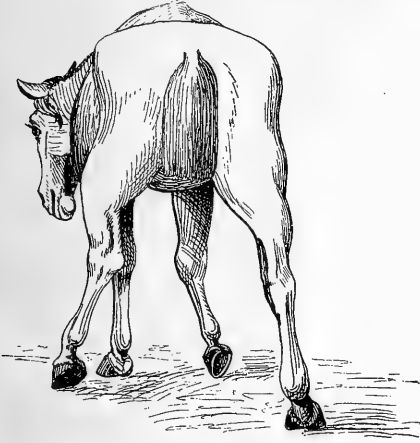


GONIODES STYLIFER OF THE TURKEY.

Leithhead's Phenyle when used according to directions will not only kill the lice, but will also destroy the knits.

INFLAMMATION OF THE KIDNEYS.

Usually caused by the too free use of diuretic medicine, blistering with fly blister or getting chilled and inflammation following. (Leithhead's Liquid Blister is not liable to act this way.) Any trouble of this kind you will know by profuse sweating, great pain in the loins of the kidneys. The horse does not wish to move, and when he does he straddles in his walk. He has a high fever, and increased suppuration. His trouble, if neglected, is liable to run to gangrene and



THIS WALK INDICATES INFLAMMATION OF THE KIDNEYS.

death. Treat the animal the same at the beginning as you would for fever. Give him Leithhead's Fever Remedy. See that the action of the bowel is good, if not, give linseed oil in quart doses. If no relief comes in a week, give the animal tea made of flaxseed and slippery elm bark, encourage sweating. Leithhead's Liquid Blister will be beneficial. (Leithhead's Liquid Blister contains no fly blister.) Avoid spirits of nitre and saltpeter, as such medicines only make the trouble worse, and will be liable to be given because they are supposed to be the real remedy for the disease.

DIARRHOEA.

Give water with flour stirred in, about two quarts every 3 or 4 hours. Restrict the drinking, feed light.

CATARACT OF THE EYE.

An opaque substance over the pupil. Nothing seems to be of use for this trouble.

PURPURA HEMORRHAGICA.

Where the water portion of the blood oozes through the blood vessels, and settles in the tissue, causing swelling of the limbs, continuing till the body will swell. The watery fluid will ooze through and trickle down the limbs. This trouble ends in death by gangrene or suffocation. Give the following receipt:

1 ounce tincture muriate of iron.

1 ounce tincture of gentian.

2 ounces of water.

Mix.

Give a tablespoonful every two hours with a syringe so as to reach the throat to be swallowed.

1 ounce turpentine.

3 ounces linseed oil.

Mix.

Give a tablespoonful every two hours.

Feed on oatmeal gruel. If he cannot swallow inject the gruel. Bathe head in hot water to reduce the swelling.

INFLUENZA, EPIZOOTY, PINK EYE.

Introduced into the system from the atmosphere. It is a blood disease, affecting the mucous membranes. Known by dullness, easy to sweat, many cases staggering from weakness. The horse hangs its head. The ears droop, appetite fails, eyes become red and swell, pulse often as high as 80 per minute, temperature 105 to 107 F. These symptoms for the first 12 hours are followed with colicky pains and constipation. Feed right to avoid inflammation of the bowels, as it often kills. Or Diarrhoea may set in; this is also dangerous. Treat the action of the bowels separately and very carefully, and use Leithhead's Pink Eye and Fever Remedy to reduce fever, and a treatment to cure.

ENLARGEMENT OF THE HEART.

Known by uneven force and number of pulse beats. Uneven temperature of body. Give Leithhead's Condition Powders with 1 drachm of iodide of potash added to each dose. Feed on soft feed, and give gentle exercise.

GONORRHOEA.

This is inflammation of the uretha. Foment with hot water. Give Leithhead's Stock Food for its beneficial effect on the system. Inject a solution of ½ ounce sugar of lead to one quart water. Do so twice a day.

Leithhead's White Liniment is a stable liniment every day in the year.

FOUL SHEATH.

Wash out with soapsuds and water. Be careful not to scratch. Repeat two or three times a day, till swelling disappears, then oil with olive oil.

INFLAMMATION OF THE ENDO-CARDIUM

This is inflammation of the sac around the heart. Can be heard as a harsh, rasping sound in the region of the heart.

All that can be done is to give Leithhead's Fever Cure and blister with Leithhead's Liquid Blister on the side nearest to the heart.

INFLAMMATION OF THE BRAIN.

Inflammation of the brain symptoms: Quick respirations, delirium, which runs into stupidity, horse places his head to the wall and braces himself against it. Will bruise his eyes and head badly.

If discovered in earlier stage, when pulse is full and quiet, bleed the nose, taking from two to four quarts of blood. Apply ice to head. Give Leithhead's Fever Remedy and a ball of barb aloes (as the druggist makes).

If fever leaves, blister upper part of head with Leithhead's Liquid Blister. Always secure the animal to prevent trouble in his mad spells.

STRANGLES.

Is contagious. The poison in the blood causes abscesses to usually form in the throat. Sometimes abscesses do not form, and the fever remains throughout the system. Often fatal. The fever, the running at the nose, eyes, cough, inability to swallow, etc., are symptoms. Use Leithhead's Pink Eye and Fever Cure.

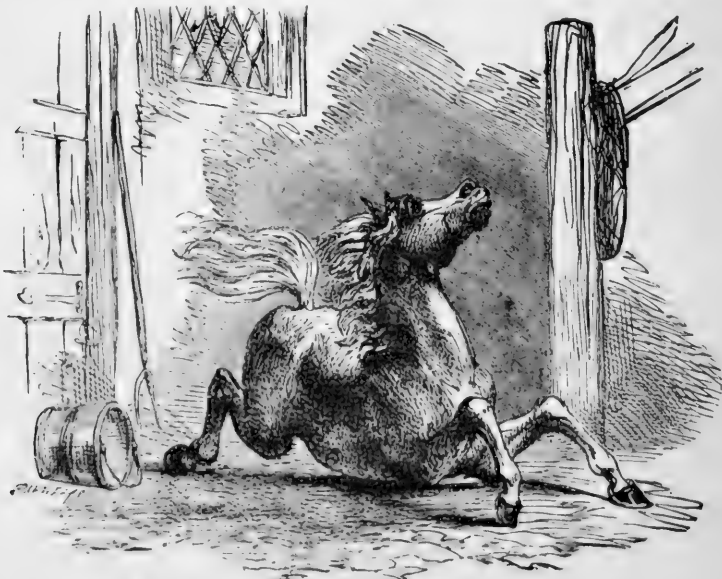
HEAVES.

A rupture of lung cells, as to lessen the contractility, causing the diaphragm and ribs and abdominal muscles to try and act for the lungs.

This trouble is incurable, as no known medicine will replace this rupture of lung cells. Avoid dust in the food. Leithhead's Condition Powders may relieve for a little while.

TUMORS.

Always consult your veterinarian.



INFLAMMATION OF THE BRAIN MADDENING A HORSE.

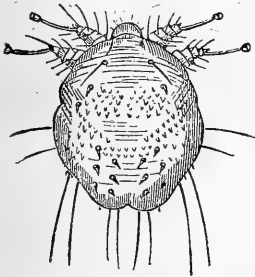
L. W. LEITHHEAD DRUG CO., DULUTH, U. S. A.

QUINSY.

Sore throat where abscesses have formed. Apply hot poultices to the throat, even to the ears. Give Leithhead's Fever Remedy.

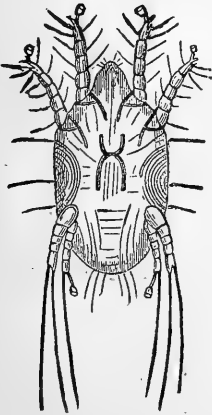
MANGE.

This parasite disease is caused by several different species of insects. The insect here illustrated, named "Sarcoptes Equi," burrows in the deeper layers of cracks of the skin and makes a treatment more difficult.

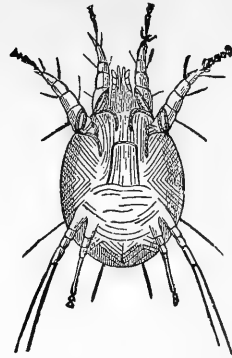


SARCOPTES EQUI.
The Mange Pest.

The insects illustrated here as "dermatophagus equi" and "dermatocoptes equi," live under the scabs of the flesh and of course are much easily rid of.

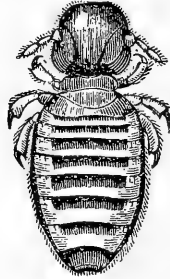


Dermatophagus Equi, the Mang Pest.

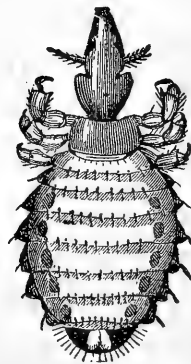


Dermatocoptes Equi, the Mange Pest.

Mange is easily known by the terrible itchin that cannot be satisfied. The more the horse rubs the more it itches.



Trichodectes or Bird Louse of the horse.



Homatopinus, or Blood Sucking Louse of the horse and ass.

LEITHHEAD'S GALL CURE KILLS THE PAIN and CURES the GALL.



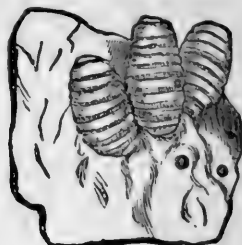
(GMTNE MAQUIFIELD)

This pest is usually passed from one horse to the other when pastured together. The illustration is a good suggestion.

Leithhead's Phenyle is a preparation which is sure to reach these pests and destroy them. Leithhead's Phenyle is harmless.

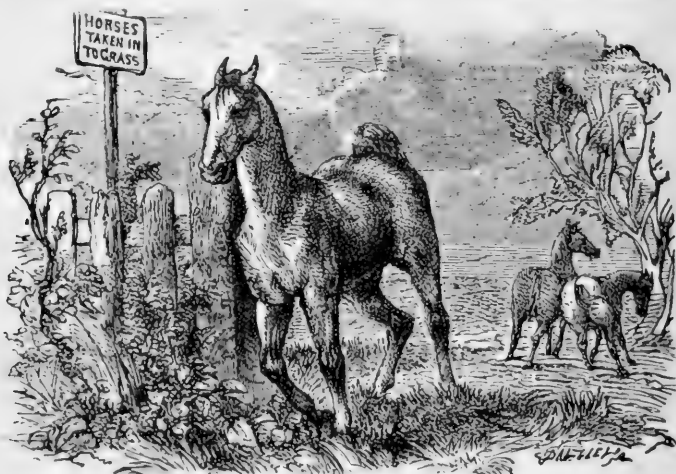
BOTS.

This gadfly attaches himself to the hair of the front of the horse, and lays its eggs so as



BOTS FASTENED TO STOMACH UNABLE TO LET GO.

to be convenient to the horse's mouth. The horse by frequent use of his tongue in lick-



A FRUITFUL MEDIUM FOR THE SPREAD OF MANGE.



Test for Mange.

L. W. LEITHHEAD DRUG CO., DULUTH, U. S. A.

ing, will carry these eggs into its mouth, and from there is carried through to the animal's stomach. The only way to rid the animal of such a pest, is to purge him with



THE GADFLY.

an aloes ball as prepared by your druggist, and feed with Leithhead's Stock Food for a month.

CEREBRO-SPINAL MENINGITIS.

Very rare; always get a veterinarian.

A common disease in the cities, very rare in the country.

The horse will seem listless, stumble, reel behind and sometimes almost fall down. The fever arising develops the disease, and will end in many instances fatally.

DISEASES PECULIAR TO MARES.

PARTURITION.

Usually no trouble occurs to a mare foaling. Should any trouble occur it is more liable to produce death than with the cow. A delay of one hour is dangerous.

In case of malpresentation refer to this section in the cow for information.

Some cases of the dead foetus can be noticed by the mare's persistent straining without results. Assistance is necessary to relax the muscles.

Pass in your hand after oiling it with olive oil and insert one finger into the os, then two and three and so on, working slowly till it is dilated. If this does not succeed, insert a sponge wet with Fluid Extract of Belladonna into the os. Let it remain 10 or 12 hours and then try the hand again.

ERYSIPELAS.

This is inflammation of the skin.

A skin disease supposed to be contagious.

Give Leithhead's Condition Powders. Feed on boiled oats, barley, etc., paint the healthy skin for two inches all around the diseased part with tincture of Iodine, and use the following:

1 ounce tincture muriate of iron,

8 ounces water.

Mix.

Keep the surface wet with it till the skin begins to be irritated; then use Leithhead's White Liniment. If extensive sloughing takes place, poultice with oilcake meal with charcoal sprinkled over the poultice, till a healthy sore is obtained; then apply Leithhead's White Liniment. If the erysipelas comes from an unhealthy sore, cauterize it with powdered bluestone continuously once a day, till all signs of a purplish, unhealthy condition have disappeared; then continue with Leithhead's White Liniment. Continue for several weeks, giving soft food enough to keep the bowels loose.

INFLAMMATION OF THE WOMB.

From injury or exposure to cold after parturition usually shows about 3 days after foaling.

Can be easily detected by fever, colicky pains, continual straining as if to foal again, looking around towards the flank, a discharge of black fluid from the womb, an arched back.

Give one pint to a quart of Raw Linseed Oil.

Wash the womb with warm water to which a little whiskey has been added. Inject a solution of Leithhead's Phenyle (2 teaspoonfuls to one pint of water). Give Leithhead's Pink Eye and Fever Remedy till all signs of fever have disappeared.

Feed light. Keep warm.

Insure Against Loss with Leithhead's Colic Cure. 50c.

LEUCORRHOEA.

Catarrh of the vagina or womb, known by whitish and slimy discharges.

Occurs after difficult foaling or irritation and inflammation.

Liable to become chronic.

Wash out twice a day with Leithhead's Phenyle solution (2 teaspoonfuls to one pint) until cured.

Feed with bran mash and Leithhead's Condition Powders.

PUERPERAL FEVER.

A fever usually occurring the second or third day after foaling. Known by a high fever with ears and extremities cold.

Good care, green food, are about all that is necessary. Leithhead's Fever Cure is advisable.

Raw Linseed Oil if at all constipated.

MAMMITIS.

Inflammation of the udder.

Apply hot water as continuously as possible. Manipulate as much as the soreness will allow. Encourage the foal to suck milk at intervals so as to prevent the milk curdling.

If allowed to go on till supperation, open the abscesses and inject a solution of Leithhead's Phenyle (2 teaspoonfuls to a pint of water) and apply Linseed poultices—changing night and morning. In winter blanket, take the chill from the water, feed soft feed, give Raw oil for constipation.

Rub the glands with camphorated oil.

ABORTION.

Whenever this trouble happens give a few days rest.

Feed bran mash and if fevered use Leithhead's Pink Eye and Fever Cure.



OUR GUARANTEE
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1902

The Teeth of Cattle.



FIG. 1

Teeth of the calf at birth, showing the two incisors, milk teeth.



FIG. 2

Teeth at two weeks old, showing four temporary incisors.



FIG. 3

Teeth at three weeks old, showing six incisors.



FIG. 4

Teeth at one month old, showing eight incisors, or the full set.



FIG. 5

Teeth at six to eight months old, showing wear on first two, or central teeth.

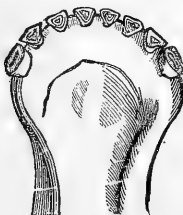


FIG. 6

Teeth at ten months old, showing absorption in first two pairs of teeth, and wear of two outside pairs.

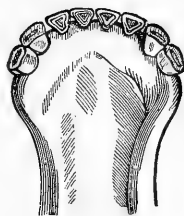


FIG. 7

Teeth at twelve months old, showing absorption in all the nippers, except outside pair, and wear in these.

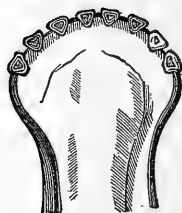


FIG. 8

Teeth at fifteen months old, showing absorption and wear in all the temporary nippers.

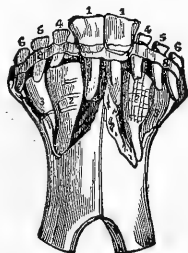


FIG. 9

Teeth at eighteen months old, showing two first permanent incisors (1-1), and next two pairs (2-2 and 3-3), growing and pushing upwards towards the surface; also 4-4, 5-5 and 6-6 showing absorption. At (8-8) is shown the alveoli, or cells in the teeth.



FIG. 10

Teeth at two years old past, showing four permanent incisors and four temporary ones, absorption nearly complete; also marks of wear on two first pairs.



FIG. 11

Teeth at four years old past, showing eight permanent incisors—the full mouth—and complete complement; also wear on all but outside teeth.



FIG. 12
Teeth at five years
past, showing wear and
dark marks.



FIG 13
Teeth at ten year old,
showing permanent
spaces between them;
and also shape from
natural wear by use.



OUR GUARANTEE
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1902

Diseases of Cattle.

COMPARISON OF THE HORSE WITH CATTLE IN DISEASE.

Cattle are phlegmatic animals. (Horses have a nervous organization and are more sensitive). This makes the cattle more susceptible to the diseases of the blood than horses, such as rinderpest, variola and anthrax, and less liable to tetanus, paralysis, diseases of their air-passage as the horse. As they being fed for fat instead of muscle, such troubles are not necessary to take up, as they are almost unknown to cattle. Consumption is a contagious disease very prevalent and dangerous. Great care should be taken of this trouble, as the disease is carried from the cow to the man, being in the milk. Diseases are often contracted through sympathy, the trouble affecting one animal of a herd will be seen to follow in the others without any other reason prevalent, except sympathy, just as abortion, etc. Pulse can be most conveniently taken from the artery passing over the middle of the first rib. The normal pulse of the cow is 55 per minute, in old animals, but especially in calves, it is a little faster. Respirations ten to fifteen a minute.

CONTAGIOUS PLEURO-PNEUMONIA.

In cases of this disease the animal upon death should be buried, and all due caution taken to prevent the spread of the disease, such as isolating the animal and using proper disinfections. Leithhead's Phenyle is the best disinfectant that can be had following the directions for this purpose.

TO KNOW THE DISEASE IN THE EARLY SYMPTOMS

The temperature rises as high as 106 degrees. There will be a loss of appetite; slight shiverings, hard, dry cough, staring coat, scanty urine and loss of milk. There will be tenderness on the ribs over the lungs, the hind legs will be drawn under the body. The cough will increase and the breathing quicken, with the nose extended. A person that is well acquainted with cattle diseases should be consulted whenever suspicion of this disease is at all thought of. There is nothing to do to the animal, except to prevent the spread of the disease.

RINDERPEST, OR CONTAGIOUS ENTERIC FEVER.

This fatal plague has never yet appeared on the American hemisphere, and for this



RINDERPEST.

reason it is not necessary for us to give space telling of it. All necessary to say is that it is a quick spreading and fatal disease.

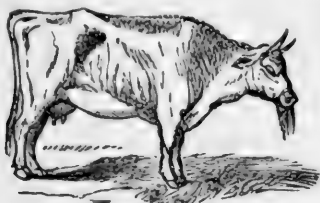
TEXAS FEVER, OR SPLENIC FEVER.

This trouble resembles rinderpest as near as any disease can. It is found in Texas and is communicated from Texas to other parts of the country. The pulse will rise from 40 beats to 120 a minute, the fever is 106 and is generally followed by a chill. The dung and urine is scanty, and yellow matter is discharged from the nostrils and mouth. The coat is rough and hard. It is a stomach trouble, and the disease is carried to the fourth stomach which will be found congested and full of coagulated blood. Treatment is not satisfactory. The disease will not show itself for four or five weeks after contact, and for this reason it is liable to spread in the shipping of cattle to a great distance.

HOG CHOLERA GERM KILLED WITH LEITHHEAD'S PHENYLE.

CONTAGIOUS ECZEMA, OR EPI-ZOOTIC APHTHA.

This is a skin disease affecting the mouth, tongue, lips, feet legs and udder. Contagious through the discharge which will be strewn along the path followed by the animal. This trouble is contagious to all lower animals and to man. Often fatal. Milk will carry the



EPIZOOTIC APHTHA

a foot and mouth disease.

disease. The discharges will be the main indication of the trouble. The pulse and temperature rises and the animal's coat is rough and staring, and liable to shiver in fits, etc. This trouble will run its definite course, which terminates in recovery in about fifteen days.

The feed should be fed soft, and with plenty of water to drink. Most attention should be paid to the feet. In cases of sloughing of



EPIZOOTIC APHTHA

Indications of the foot being affected

the feet, Leithhead's Phenyle mixed with eight parts of olive oil as an application. In case of swelling of any great amount, apply linseed poultice, following with Leithhead's White Liniment. Keep the feet clean by bathing, and if any horn becomes detached, remove the same.

ANTHRAX.

Known as Black Leg. The main characteristic is black, tarry blood that will not coagulate. Before death spores develop, which are the active part of the virus in in-

oculation. Blood containing these spores dried for four or five years are still found to be very contagious. This dark flux blood



CARBUNCULAR ERYSIPELAS

Black leg or quarter ill.

may locate in some part of the body with a tendency to gangrene, distending that portion of the tissues, and making a crackling noise when the hand is passed over it. A blister forms, gathers and breaks up. The rings formed by this breaking and drying are the usual method of inoculating every animal that comes in contact. To use Leithhead's Phenyle would be very suitable to prevent contagion, following the directions on the bottle. This is very important, as man is liable to get the disease as well as animals.

Siberian Boil Plague, carbuncular erysipelas in sheep corresponds to this same



GLOSS ANTHRAX

or Black Tongue.

trouble. The swine are very often attacked. Dogs, cats and other small animals die from eating the carcasses of animals suffering from anthrax.

The first cases are always fatal, and treatment is of no avail, but in subsequent cases bleeding freely and giving a purgative, such as Barbadoes aloes in balls as made by your druggist. In case this is not sufficient, give Epsom salts in 1 lb. doses in place of the aloes. Give the salts by dissolving in warm

water with one or two ounces of ginger. Follow this treatment with the following, giving it as one dose two or three times a day:

- 1 drachm nitro-muriatic acid,
- 3 grains bichromate of potash
- 2 drachms chlorate of potash

by dissolving in $\frac{1}{2}$ pint of water. Never forgetting to sponge the animal with a proper solution of Leithhead's Phenyle to prevent contagion. After the animal is dead, always be sure to bury the carcass deep enough so that dogs, cats or any other beast will not dig out the meat and spread the disease.

PLETHORA.

A condition where the blood is very fat interfering with the circulation, especially through the vital organs, and in this way making them inert and unable to carry on their duties.

Known by sleek hair, tendency to fatten fast, death ending in a congested fever.

The treatment would be to restrict the diet, and give the animal doses of Epsom salts in quantities of a single handful, morning and night for a week.

ANAEMIA.

This is the reverse to plethora, being from lack of proper food, often due to exposure or impoverishment from parasites. Destroy any existing vermin with Leithhead's Phenyle, in proper solution, and give Leithhead's Condition Powders until the animal shows recovery.

RHEUMATISM.

The supposed cause of Rheumatism is now determined to be an acid blood. It is also known by lameness and disinclination to move. After a few hours the joints may begin to swell, and get hot and painful, with a tendency to change from one joint to another. Apply Leithhead's White Liniment to the joints, with some friction or bandage. If great weakness ensues, give Leithhead's Condition Powders for a couple of weeks, and give as one dose every night and morning in feed:

- 2 drachms of colchicum
- 2 drachms nitrate of potash

Continue for a week.

URAEMIA.

Noticed by inactivity of the kidneys and bladder, leaving poison in the blood.

Known by dullness, loss of appetite, failure to secrete urine, and its smell being detected on the skin.

Give large quantities of linseed tea to drink and give Epsom salts for purgative in twelve ounce doses, dissolving in plenty of water. Give condition treatment with Leithhead's Condition Powders.

PYAEMIA.

This trouble comes from absorption into the system of pus, mostly from ulcers or other poisonous troubles.

Known by high fever, increased temperature, pulse fast and hard; breath is foetid, loss of appetite, and often delirium following.

Discover the trouble if possible, liberate the pus, dressing the wound with Leithhead's Phenyle in a solution of $\frac{1}{2}$ ounce to a pint of water. Apply with a syringe two or three times a day. Give three times a day for three days as one dose the following:

- 2 drachms of iodide of potash
- 2 ounces of whiskey
- 1 ounce powdered cinchona.

in a pint of water. After recovery is started, give Leithhead's Condition Powders.

TUBERCULOSIS.

This trouble is caused from the poison of suppuration being absorbed into the system



Bad effects of the excessive use of Caustics.

forming tumors filled with fluid which is



OSTEO SARCOMA

of the upper jaw.

liable to become calcareous. It varies in size

from a small pea to a hen's egg. Many times the remaining fluid is re-absorbed into the system, and in such event the flesh of



OSTEO SARCOMIA

of the lower jaw.

the animal is unfit for food. This disease is hereditary. The first symptoms of the trouble will be a dull cough; and an un-



TUBERCULAR ULCER

on Parotid Gland

thrifty condition. The best way is to get a veterinarian to examine wherever it is suspected. There is no treatment of use.

PURPURA HEMORRHAGICA.

It is started where the blood becomes deficient in red corpuscles, and coozing through



Swelling of the jaws and cheeks and muzzle in Purpura Hemorrhagica.

the coat of the vessels, falls by gravitation to

more dependent portions of the body, causing swelling. Treat the same as you would a horse as found on another page.

CANCEROUS ULCERS.

This is tuberculosis, only it attacks the glands. Treatment is of no avail.

RED WATER IN CATTLE.

It is not necessary to describe this disease as its first start will be known by the color of the urine. Give the animal Leithhead's Condition Powders for three or four weeks. Use in case of need, doses of Epsom salt $\frac{3}{4}$ of a pound at each time for purgative. Make a complete change of food, and feed oil cakes liberally.

MALIGNANT CATARRH.

This is a blood disease causing a discharge from the nose. Its first symptoms is shivering, after that symptoms of fever. Eyes are swollen closed, and the nose begins to run a water fluid; the bowels are usually costive. Sloughing process may continue and become so extensive that the feet and horns come off. Convulsions often follow, and the tem-



MALIGNANT CATARRH

Last stage.

perature often falls to as low as 90 degrees. Death follows in the course of nine to eleven days. Make the animal cool in summer and warm in winter. Give Leithhead's Condition Powders. Foment the head with hot water liberally, and rub Leithhead's White Liniment well in once or twice a day. If the eye is not eaten through, apply with a camel's hair brush twice a day, a solution of

10 grains of nitrate of silver with 1 ounce of water. If the cornea is punctured, in addition to this receipt, touch it once a day with a stick of lunar caustic, touching the caustic directly to the hole.

MALIGNANT SORE THROAT.

This throat trouble is liable to cause suffocation by pressure on the breathing tube, and in this way it is fatal. It is similar to quinsy. The throat swells enormously, and the tongue becomes spotted and purple. Death will come with a struggle for air. If suffocation is threatened, an operation to allow passage of air would be necessary. Ap-



MALIGNANT SORE THROAT

ply Leithhead's White Liniment to the throat externally, and wash the inside of the throat with a solution of 1 ounce of chlorate of potash to a pint of water. This disease is different from anthrax, but the symptoms may be somewhat similar. The flesh is very poisonous to eat, and the carcass should be buried deep, without removing the skin.

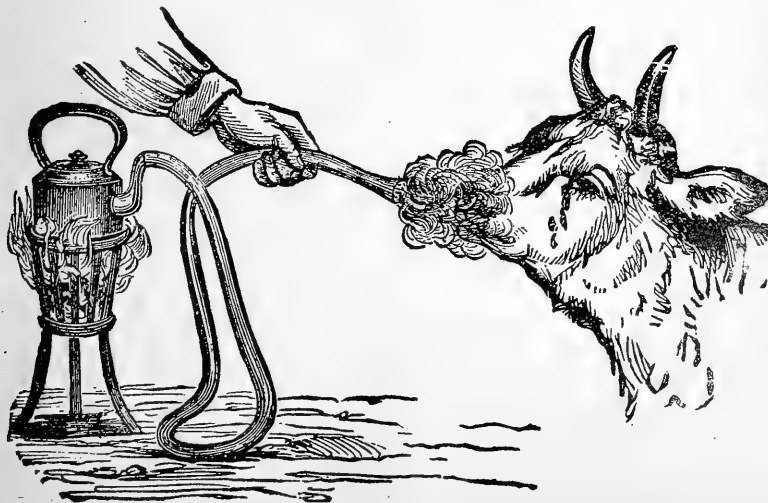
SIMPLE CATARRH.

Symptoms of fever; shivering; hot mouth; dry nose; horns hot at the head and cold at the tips; ears closed; sneezing and cough. At first, a watery discharge from the nose; tears



NOSE BAG FOR STEAMING IN CATARRH

from the eyes that will scald the flesh, etc. Remove the cause by making the animal comfortable. If the bowels are constipated, give a pint of melted lard, if too loose, give flour gruel cold. Treat the animal the same as you would for fever according to our rules in the first part of the book. In case the breathing is interfered with, steam the head in a nose-bag. After the fever is broken, feed Leithhead's Condition Powders.



APPLICATION OF STEAM TO NOSTRILS FOR CATARRH.

PARASITES KILLED AND NO HARM DONE—LEITHHEAD'S PHENYLE.

COMMON SORE THROAT.

This trouble will be noticed by inability to eat, and the cud is not chewed; the throat is found to be swollen; with more or less fever. The water that is drank will be turned back the way of the nose, owing to the difficulty



SORE THROAT

in swallowing. Use Leithhead's White Lintment for an application, and use a syringe to shoot the following mixture well back into the throat: 2 ounces chlorate of potash to 1 quart of water.

BRONCHITIS.

This is a trouble with the mucous membrane lining of the bronchial tubes. When the ear is placed to the sides and front of the chest of an animal suffering with this trouble, there will be a dry, grating sound. The temperature runs as high as 106 degrees; pulse fifty to eighty per minute. Breathing will be painful with a grunt at each expiration; a hard, distressing cough is present, raising considerable mucous and phlegm. The sufferer will not lie down. Treat the animal with Leithhead's Fever Remedy, and Leithhead's Liquid Blister in light applications to the sides is very important, following with Leithhead's Condition Powders for some little time.

PNEUMONIA.

This is inflammation of the lung tissue, and is quite common with cattle.

The animal suffering from this trouble forced to lie down on account of the pressure upon the chest, causing difficulty in breathing. The pulse is soft, quick and full, ranging from sixty to eighty per minute; temperature high as 106 degrees. A heavy, dull full sound is heard by tapping the sides, and on placing the ear against the side, there will be noticed an absence of the respiratory murmur. The ribs are fixed, the breathing being done by the abdominal muscles; the nostrils are dilated, and the countenance appears anxious. In this trouble the lungs become solid like liver.

To remedy the disease, it is necessary to get the system to absorb this before it coagulates and separates, forming gangrene and death. Treatment should be the same as for bronchitis.

PLEURISY.

Different from pneumonia, percussion of the ribs produces a clear, resonant sound; the expired breath is not hot, nor the nostrils dilated, in other ways its symptoms will be something similar. Give Leithhead's Fever



ACUTE PLURISY

Remedy to reduce the fever. Apply Leithhead's Liquid Blister to the side, and continue for some time with Leithhead's Condition Powders.

HYDROTHORAX.

Follow the information under the head of this disease for horses.

INFLAMMATION AND PARALYSIS OF THE TONGUE.

The tongue is swollen and hangs like lifeless. Remove any offending substance, and



PARALYSIS OF TONGUE FROM INJURY.

Moment with hot water. To bleed it, would be a help.

Apply with a swab three or four times a

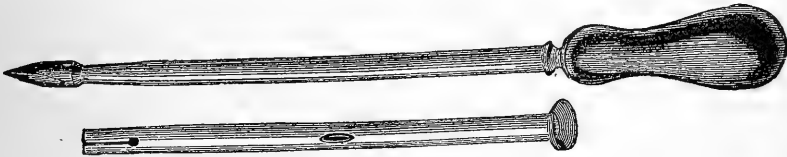
ribly distended with gas, and when tapped is elastic and resonant like a drum. The diagram shown will point the place to use the trochar, or any other sharp instrument that will be serviceable to tap to let the gas come through. Care should be taken to find the right spot. After acute symptoms are over, give Leithhead's Condition Powders for some little time.

IMPACTION OF THE OMASUM, OR FARDLE-BOUND.

The omasum, or the third stomach, is a sack of a great many layers, arranged to rub constantly one on the other to give a grinding action to the food. If this stomach suffers from want of moisture, the food does not pass over thoroughly, leading to inflammation.

Known by the animal looking to the right side; great tenderness on the right side just below the ribs where a hard substance can be felt. The animal makes constant attempts to pass faeces; fever will set in, which slowly increases as the disease progresses.

Treatment must be prompt. Give as a cathartic, 1½ pound of Epsom salts to which



TROCHAR AND CANNULA.

day 2 ounces of honey, 1 ounce of vinegar to ½ pint of water, mix.

HOVEN.

This is distention of the paunch with gas



OX SUFFERING FROM HOVEN.

from acute indigestion. The paunch is ter-

20 drops of croton oil has been added, dissolve in two quarts of water which has been warmed. Encourage the drinking of as much water as possible with this dose afterwards. Give injections of warm water and soap every half hour, and blanket the animal. Give small doses of Leithhead's Colic Cure every two hours. Should the animal need any nutritive stimulant, to repeat the dose of Epsom salts would be useful. If no help comes, call on a veterinarian, if possible.

DYSPEPSIA.

Shown by a capricious appetite that is dainty at first. It is not a serious disease, but weakens the vital functions, so that the animal is unable to resist other diseases. The best treatment is Leithhead's Condition Powders, which will bring a return of the appetite.

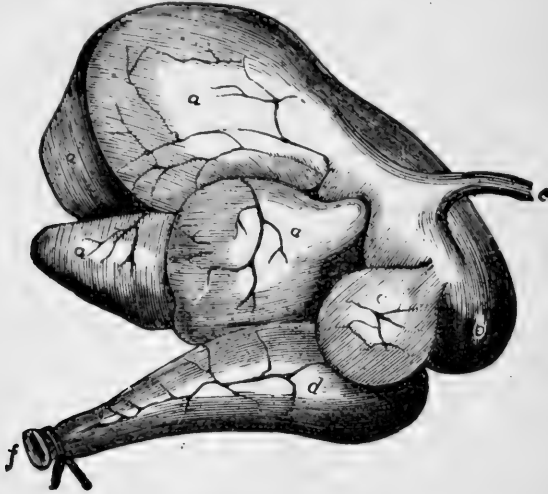
LEITHHEAD'S WHITE LINIMENT IS SOOTHING AND HEALING.

IMPACTION OF THE RUMEN, OR MAW-BOUND.

This is where the food becomes impact in the stomach, causing temporary paralysis. The only way to remedy this trouble is through some experienced veterinarian.

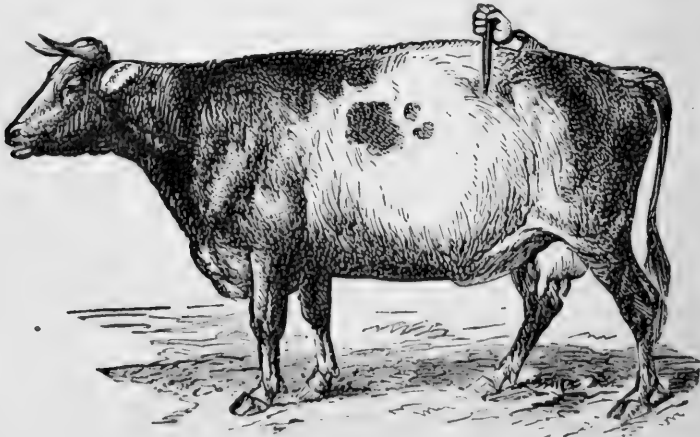
CONSTIPATION.

Give 1½ pounds of Epsom salts with plenty of water, with more bulk food. Feed Leithhead's Stock Food for some time.

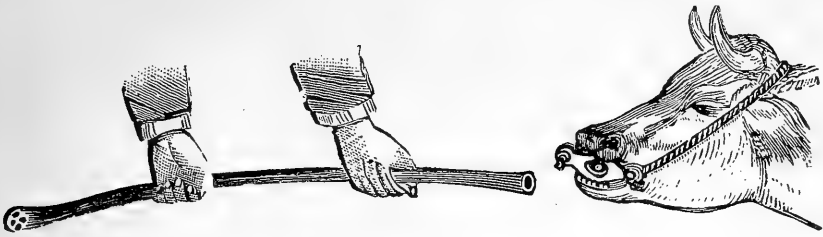


COMPARTMENTS OF THE STOMACH OF RUMINANTS.

- | | |
|---------------------------------|--|
| a. Rumen, or first compartment. | d. Abomasum, or fourth compartment. |
| b. Reticulum, or second do. | e. Esophagus, or gullet. |
| c. Omasum, or third do. | f. Entrance to the intestines, or pylorus. |



TAPPING THE RUMEN.
To evacuate the Gas in case of hoven.



SECURING WITH THE WOODEN GAG

Prior to passing the probang to evacuate the gas from the stomach.

DIARRHOEA OR SCOURS.

This is caused by improper and inferior food or irregularity. Often found with other

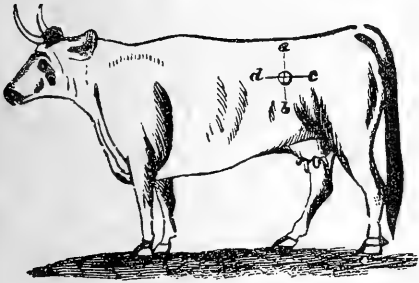


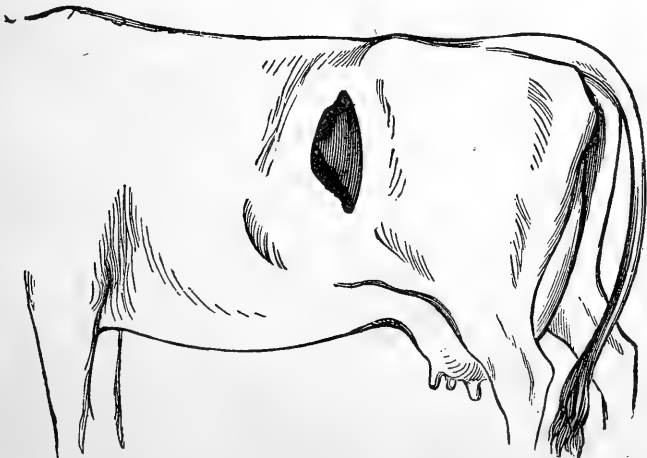
DIAGRAM SHOWING WHERE TO TAP RUMEN FOR HOVEN.

Insert trochar at point where lines cross.



CALF SUFFERING FROM DIARRHOEA.

diseases, such as dyspepsia, etc. An acid condition of the stomach is usually the cause, especially with young calves that have been fed on milk. In case of the calf being trou-



RUMEN EXPOSED FOR MECHANICAL REMOVAL OF ITS CONTENTS.

PAIN DISAPPEARS—GALL CURED—LEITHHEAD'S GALL CURE.

bled, add to the milk three tablespoonful of limewater and a quart of starch gruel, give night and morning. Restrict the quantity of drinking water, and keep the animal perfectly quiet for some time. If this treatment with proper care does not relieve, give a cathartic of $\frac{1}{2}$ pint of melted lard, which will rid the system of any retention that is causing the trouble, and follow for some little time with Leithhead's Condition Powders.

DYSENTERY.

This is inflammation of the mucous lining of the stomach and bowels. It is shown by severe straining, and watery, offensive, bloody discharges, high fever with excessive thirst, and loss of appetite; it often proves fatal through prostration. Be very careful not to allow the animal to drink too much water. Dissolve in the drinking water chlorate of potash, one ounce to the pail. Give frequent injections of starch gruel with an ounce of laudanum in each ounce. Use as a cathartic to take away any irritation. Epsom salts in $\frac{1}{2}$ ounce doses dissolved in water. Feed lightly, and follow the above treatment with Leithhead's Condition Powders for a week or so.

ENTERITIS.

This is inflammation of the digestive apparatus, but quite different from dysentery. Caused by eating poisonous substances, or too sudden checking of diarrhoea. There is constipation, and such foeces that are passed being hard, dry and coated with mucous, offensive and bloody; high fever with a thirst that is hard to quench; appetite is lost; breathing becomes labored. The animal moans, and refuses to move; death will follow after an illness lasting from one to two weeks.

Encourage the animal to drink large quantities of water, and give as a purgative $1\frac{1}{2}$ pounds of Epsom salts in water. The best thing to do is to get a veterinarian for the animal if possible. Upon recovery give Leithhead's Condition Powders to tone the system.

PERITONITIS.

This is inflammation of the serous membrane lining the cavity of the belly; it always results from an injury. The animal will have fits of shivering, noticeable around the flanks; the animal's temperature will fall

below the normal; the belly fills with water, and death then follows.

Give a dose of Epsom salts, one pound to a $\frac{1}{2}$ gallon of water, follow it with frequent injections of soap and water. Giving Leithhead's Fever Cure in a proper proportioned dose for cattle until the symptoms of fever have left. After the animal begins to get well, give Leithhead's Condition Powders.

LUMPY JAW.

This is an infectious disease, which, if brought into a herd, will break out in 50 per cent during the course of six to twelve months. It is a germ disease; the germ enters the jawbone through a split or decayed tooth, or an abrasion of the gum, then it grows and improves rapidly, causing a tumor or lump to appear. The teeth will get loose; the tongue swells and becomes very hard, making it very difficult for the animal to eat or drink; the glands around the throat will swell and discharge after breaking similar to an abscess.

To prevent the spreading of the disease Leithhead's Phenyle should be used as an disinfectant. Surgical treatment consists of opening the tumors freely with a knife, emptying the sacks and packing them thoroughly with cotton dipped in tincture of iodine. The packing needs to be removed once every two days, till the tumor begins to shrivel. When the disease seems to be under control, stop this packing and dress the wounds with a solution of Leithhead's Phenyle, a tablespoonful to a pint of water two or three times a day. The meat of the animal so affected should not be used.

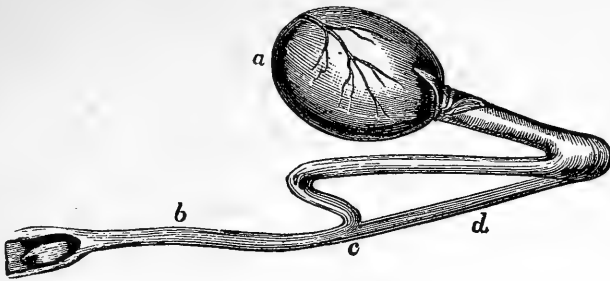
INFLAMMATION OF KIDNEYS.

Very rare in cattle. Follow the same



OX SUFFERING FROM INFLAMMATION OF THE KIDNEYS.

directions as under horses.



URETHRAL CANAL, ETC., OF THE OX

- a. The bladder.
b. The urethral Canal.

- c. Curves of the Urethral Canal.
d. The retractor muscle of the penis.

RETENTION OF THE URINE.

Necessitates a veterinarian.

ALBUMINURIA.

Is similar to Bright's disease in human.

This disease is common in sections where they feed turnips for an exclusive diet. The urine will be thick, mucilaginous and dark colored; often fails to produce albumen on the application of heat, a common test, but with tincture of galls, solution of bi-chloride of mercury and alcohol, will always separate some. But the only treatment to give is to change the diet. Give Epsom salts in pound doses in sufficient water. Follow with Leithhead's Condition Powders for some time.

INFLAMMATION OF BLADDER.

Follow the same treatment as under the horse.

VERMINOUS BRONCHITIS.

The symptoms of this disease is similar to bronchitis being a specie of worm, the egg of which is swallowed in grazing. Calves and sheep on account of their biting closer than cattle are liable to be affected. Known by a slight, husky cough at irregular intervals. Breathing becomes more and more embarrassed. The worm will either be coughed up singly or rolled together. Feed liberally with nutritious food; diet with roots, mixing with the food Leithhead's Stock Food.

Burn Turpentine on shavings, allow them to breath the fumes.

GADFLY, LICE AND MANGE, AND OTHER INSECTS BOTHERING THE SKIN OF ANIMAL.

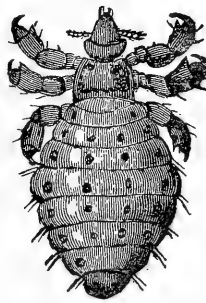
Make a solution of Leithhead's Phenyle one

part to twenty parts of water, and use as a

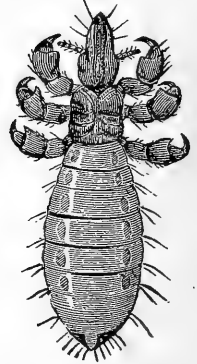


OX GADFLY
(OESTRUS BOVIS)

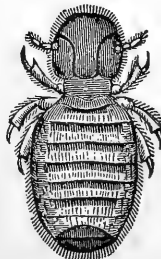
solution, applying two or three times a day.



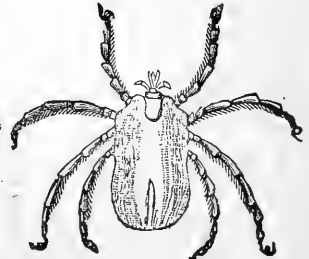
OX LOUSE



CALF LOUSE

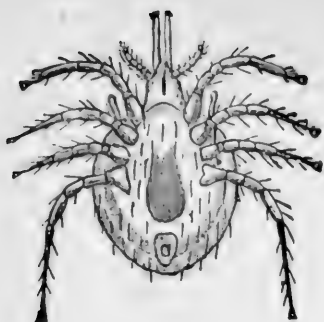


BIRD LOUSE



OX TICK

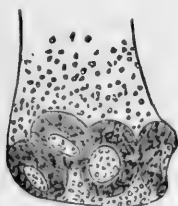
LICE and THEIR KNITS ARE KILLED with LEITHHEAD'S PHENYLE.



GAMASUS OF MUSTY FODDER.

TAPE WORMS AND OTHER WORMS IN CATTLE.

The best form is using Leithhead's Worm

HEAD OF TAPE WORM GOT BY EATING
BEEF.

Powders according to the directions on the package.

EYE TROUBLES.

Follow the same directions that you would for horses.

DISLOCATION, SPRAINS, ETC.

Use Leithhead's White Liniment.

WOUNDS.

Use Leithhead's White Liniment.

MALPRESENTATIONS OR PAR- TURITION.

The period of gestation in cows is about nine months. Sometimes a few days less, but usually a few days more. The cow is liable to secrete herself from the others at this time. The cow lies down occasionally stretching out. The first object expelled is the water bag, usually the size of a man's head. Sometimes it breaks, other times it hangs as low as the hocks unbroken. The two forefeet next present themselves, the nose lying between the feet. To expell the head is three-quarters of the labor; the remainder to pass the shoulders, after which everything is easy. The cow will immediately rise and dress the calf with its tongue, thus drying him off before chilling. If the cow should need help after half hour's effort, someone she is acquainted with should attend, being quiet and gentle in his ways. A second person should not be present except when necessary. When the feet are properly presented, catch hold of them, one in each hand, pull firmly and evenly, and at exactly the same time the cow strains. The main reliance of the operator is good judgment.

In case of malpresentation the first thing to be done is to push the foetus back out of the passage, so as to allow room for the arm and hand to get hold of the parts that come first. This must be done to conform to nature's way, and is somewhat difficult. If the



STRAIGHT HOOK



JOINTED HOOK

cow is standing, the trouble is less. If con-

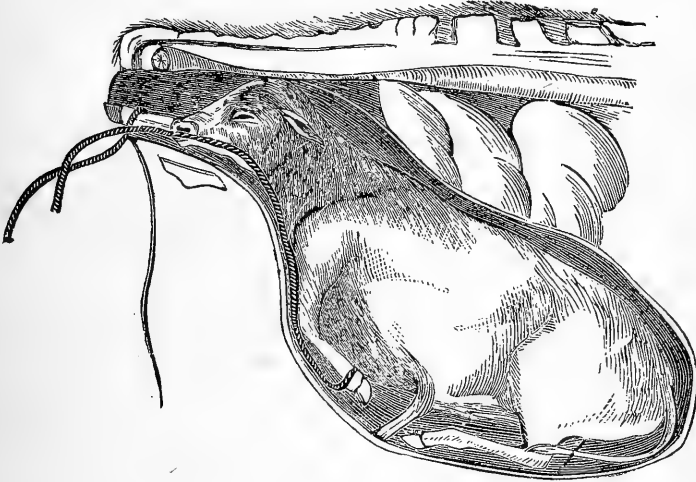


CONCEALED KNIFE

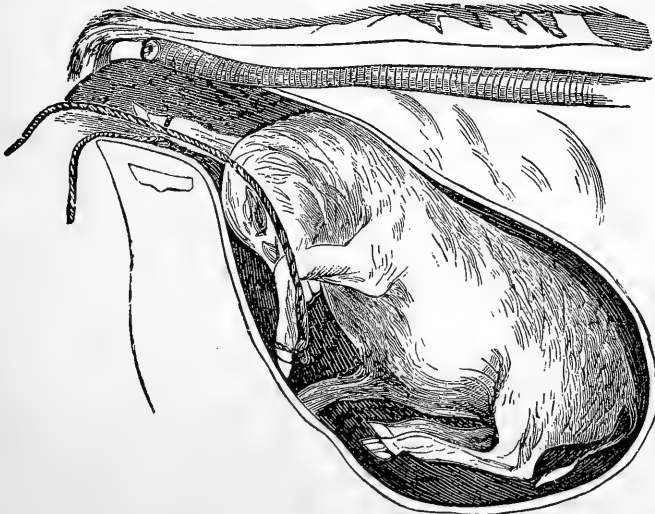
venient, a pully to raise the cow is a great help.

1st.—If the front foot and nose are entered in the passage, and the other foot bent back,

the retracted foot must be placed in the proper position on account of the obstruction. Tie a small rope around the foot presented, so as not to loose it, then push the calf back to allow the arm to enter and seek the other foot. Take in a noose of the rope and put over the foot (see cut) and cover the hoof with your hand as you bring it forward to prevent scratching the womb. This done, delivery will follow quickly. In case the nose and one foot be turned up, follow as before, but catch the nose also, and this is all.



FIRST MALPRESENTATION—One fore foot and nose entered, the other foot bent back.



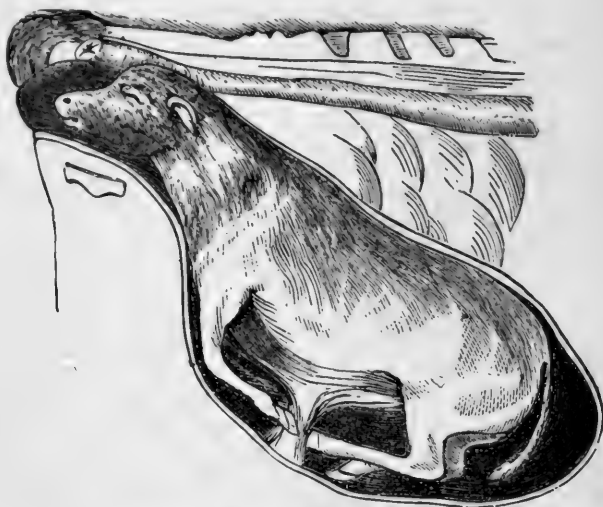
SECOND MALPRESENTATION—One fore foot presented, the other foot and nose turned down.

The Greatest and Cheapest Antiseptic—Leithhead's Phenyle.

2nd.—When one foot is presented the other foot and nose being withheld, proceed as described in the first.

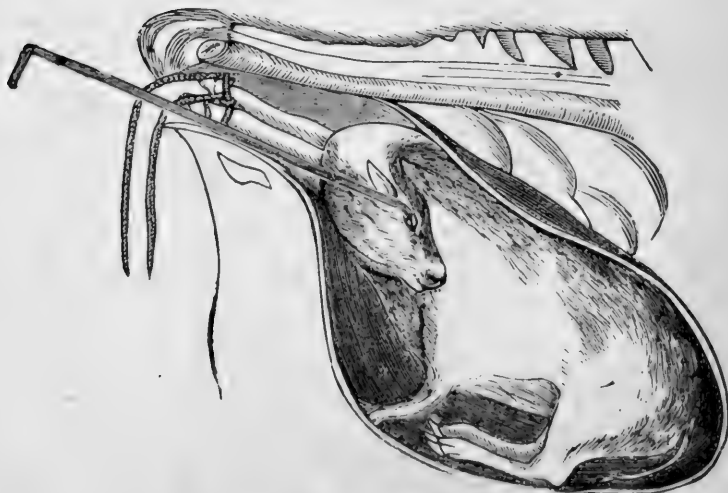
3rd.—In case the nose is presented, and the feet withheld, the rim of the pelvis holds the shoulders. If held long the head will swell,

and the calf is choked to death. In this way the only course is to cut the calf's head off, then push the body back, and get the feet started first to aid the natural way. When the head is not swollen, push it back and proceed to bring the feet up as they should be first.



THIRD MALPRESENTATION.

The nose presented, and both fore feet bent back.



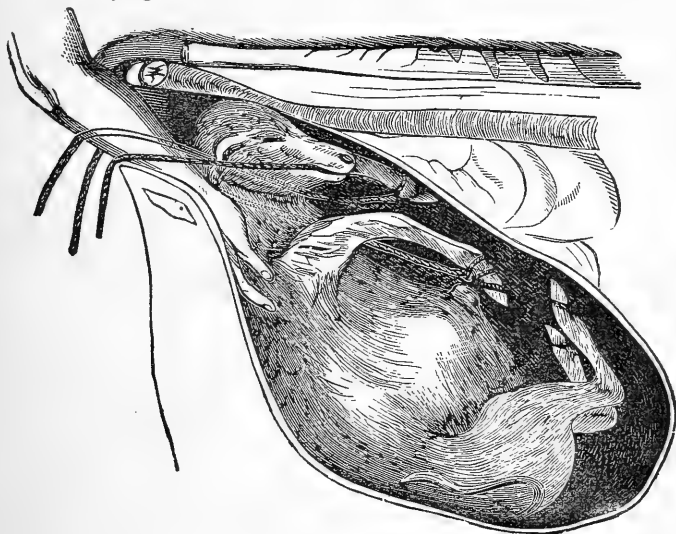
FOURTH MALPRESENTATION.

The fore feet in the passage, the head turned back on the side.

4th.—If the forefeet are presented, and the head is turned back and against the side. Tie the rope to the feet, carry a piece of it to get in the mouth if possible, or around the jaw. If failing, use a hook to hook into the eye socket; push the feet back until the head is brought into passage.

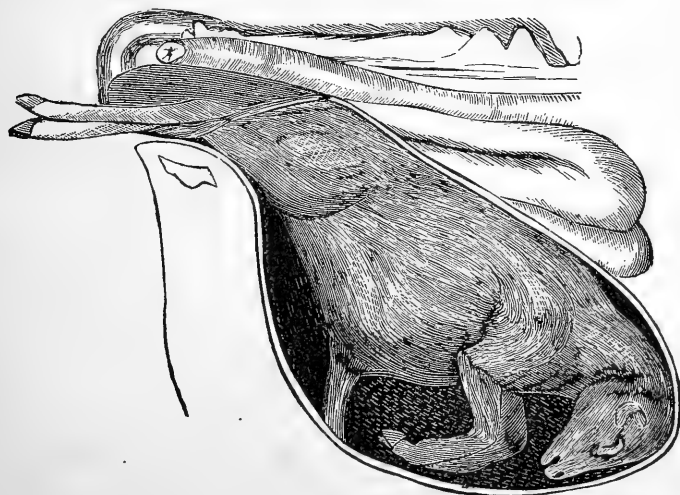
5th.—If the foetus is lying on his back with

the pole presented, and the feet bent back upon the belly, the delivery may be MADE, but the nose and feet must be delivered first. To do this, pass in a noose for each foot, and another for the upper jaw to put in the mouth. Push the calf back to liberate the parts, and aid nature with the means of these ropes, with due caution to prevent the feet from lacerating the womb.



FIFTH MALPRESENTATION.

The foetus on his back, with the poll presented, and both fore feet bent back.



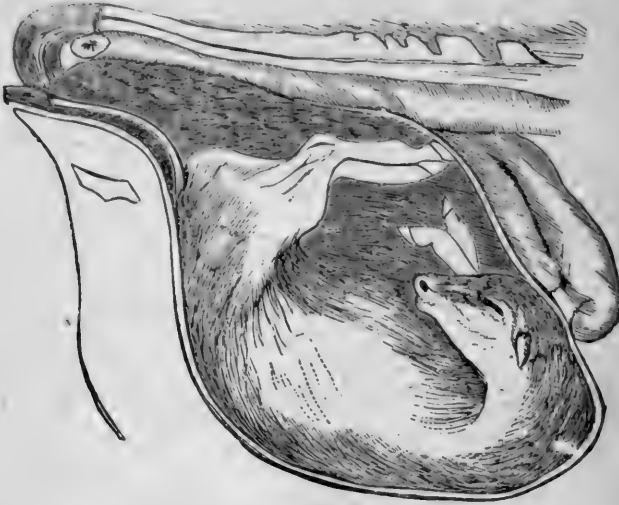
SIXTH MALPRESENTATION.

The hind feet both in the passage.

6th.—Both hind feet are in the passage, calf's back against the loins of the mother. This position not difficult, but delivery must be hastened to prevent the calf suffocating.

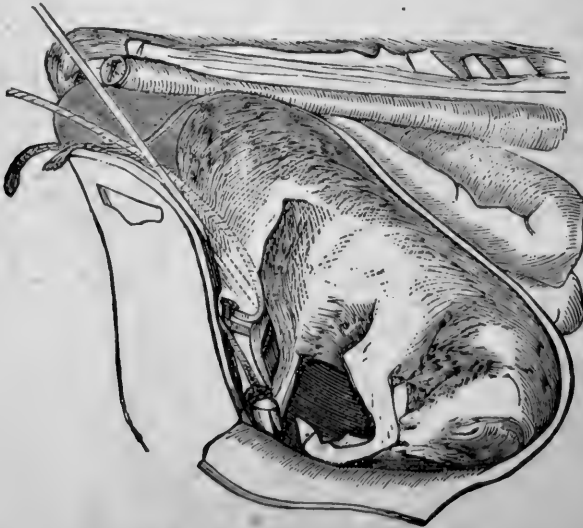
7th.—The breech is presented, and the hind

feet are up against the cow's back. The feet must be drawn back into the passage. Pass in a rope, take a noose around the hocks, pull the foetus down so as to put the noose around the feet, and draw them back, this done, and



SEVENTH MALPRESENTATION.

The calf lying on its back, the hind feet up against the cow's back and the breech presented.



EIGHTH MALPRESENTATION.

The breech presented, with the back up against the loins of the mother, and the hind feet bent downwards.

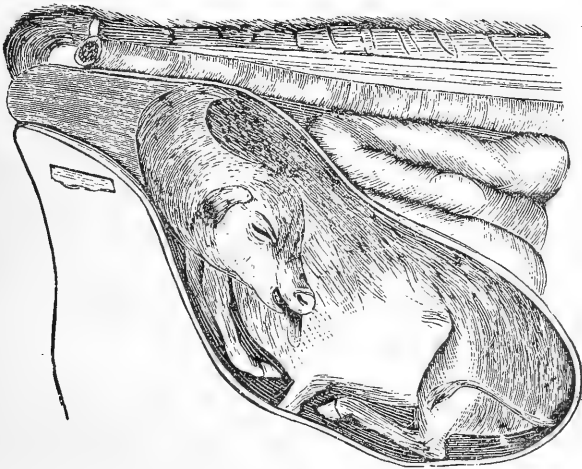
the points of the buttocks being raised over the rim of the pelvis at the proper time, the calf may perhaps come without further trouble. But if otherwise, persevere, and turn it into the position seen in the cut for the sixth malpresentation. Failing in this, and as a last resort, it may be necessary to cut the calf up, and take him away piece by piece, with the concealed knife. The latter operation requires considerable skill, in order to avoid wounding the womb and vagina. It cannot safely be attempted, except by an elevation of the cow very high behind and pushing back the foetus, and drawing up the legs and feet into the passage, it can be delivered. See cut No. 7.

the legs and feet into the passage, it can be delivered.

9th.—The neck is presented in the passage, the head bent around to one side and the legs down against the belly. First, get the feet up as directed for the first three malpresentations; then turn the head into the passage, as directed for the fourth. See cut No. 9.

We need hardly say that before introducing the hand and arm, in any of the cases we have mentioned, they should be thoroughly anointed with lard or oil. The exact position of the foetus should be determined beyond a doubt before attempting to change or "turn" it.

These nine malpresentations do not com-



NINTH MALPRESENTATION.

Neck presented, with the head turned against the side and both feet down.

8th.—This is a breech presentation in which the calf's back is up against the mother's loins, and the feet are bent downwards. This is considered to be the hardest position of all to rectify. Pass in the ropes, and take a noose around the hocks, and then around the feet; then, by elevating the cow very high behind and pushing back the foetus, and drawing up

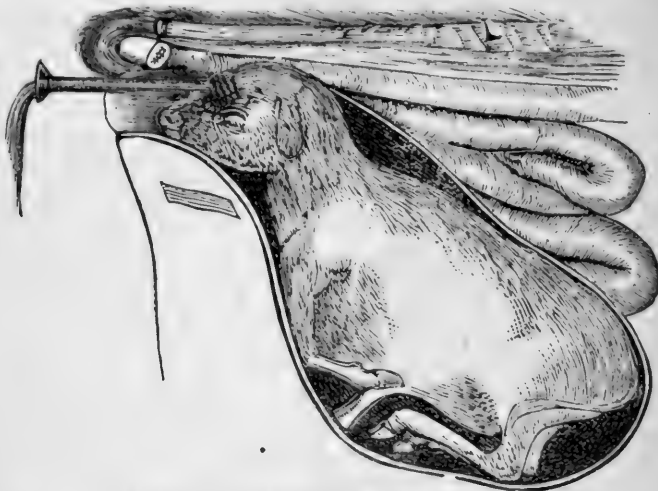
prise all the difficulties attending the parturition; for there may be abnormal developments of the foetus, rendering it a mechanical impossibility to effect its delivery alive. By far the most common phenomena under this head are hydrocephalus (dropsy of the brain) and ascites (dropsy of the belly.)

HYDROCEPHALUS.

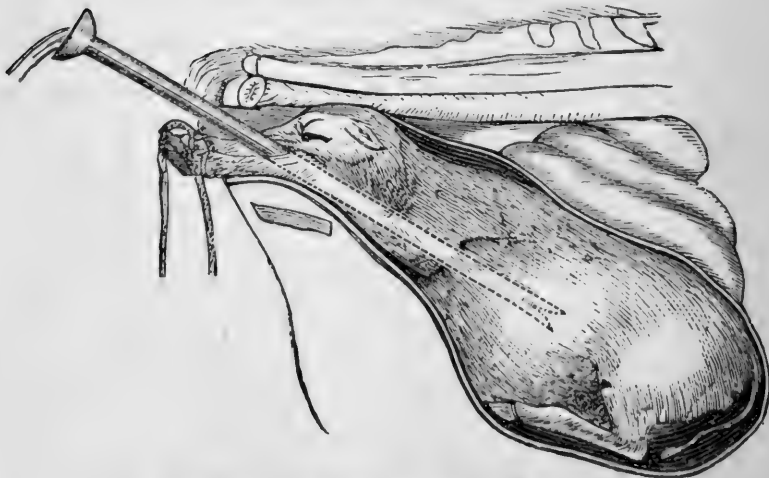
This occurs mostly in old, thin cows, but sometimes also in excessively fine-bred ones. The head must be tapped with the trochar and cannula, this evacuating the water; then crush in the skull, and deliver.

COW DYING TO SAVE CALF.

In case of serious malformation of the cow, when all hope of saving her is given up, and the calf is still alive but cannot be delivered, resort should be had to the Caesarian operation, as a veterinarian will do.



HYDROCEPHALUS—with malpresentation



ASCITES, OR DROPSY OF THE BELLY.
The presentation is natural.

ASCITES.

Carry in the concealed knife, and with it tap the belly and let the water out into the mother's womb. If this is not successful, use a long trochar and cannula, as shown in the cut.

CARE BEFORE PARTURITION.

Some treatment,—or rather, special care—is very necessary both before and after parturition. If the delivery is easy, a warm bran mash with a little salt in it is soothing

and slightly nutritious. The cow should be dieted a few days before calving, to loosen the bowels; if on hay, give roots and bran. Avoid having breeders too fat, the other extreme being just as bad. If too fat, puerperal fever is much more apt to follow; if too thin and weakly, the placenta is sure to be retained. Avoid both these extremes, have them in mid-dling flesh up to within a month of calving; then increase the feed up to within two days of that time, so as to have them in thriving condition. If the cow is fat, it is a good plan to give a day or two before, half a pound of Epsom salts in a quart of water, to loosen the bowels.

If delivery is long and exhausting, give a pint of warm ale during its progress, and again afterwards. If the udder fills very full before calving, it is well to milk a little to relieve its painful tension, milk the cow immediately after calving, while she is drinking her slop, and feed the calf before he gets up, about a pint of the milk, giving the rest to the cow. It will act upon her as a healthful laxative. Inasmuch as the milk at this time is very different from what she ordinarily gives, there is very little danger of begetting the habit of milking herself.

The milk, at first, is rather thick and yellow, and is not fit to use for family purposes under three or four milkings. Some people indeed have a prejudice against using it under two weeks; nevertheless, except for drinking, it is good for all purposes after the third milking; provided there is no disease in the cow.

PROLONGED AFTER-PAINS.

These sometimes occur after protracted and painful delivery, from failure of the womb to contract, or from retention of the after-birth, —most commonly in weak, thin, old cows. For treatment, injections of cold water thrown up the vagina will usually suffice. They should not be allowed to continue, as they are apt to lead to inversion of the womb.

RETENTION OF AFTER-BIRTH.

When the placenta or after-birth is retained, mechanical means are necessary to remove it; for it becomes a foreign body as soon as the foetus is delivered, and begins at once to decompose, and the impure matter being absorbed into the circulation, the general health of the animal suffers decidedly.

It is best to let the placenta remain till the end of the second day, or beginning of the third, to soften a little. If it does not come out; it is easily removed by inserting the

hand and arm to the shoulder, and then with the other hand move the hanging membrane; at the same time take each cotyledon or button by which the placenta is attached to the womb, in turn, and pinching it a little between the thumb and forefinger, it will detach from it, much as unbuttoning a garment. Great care is required not to pull off one of these cotyledons, or the resulting hemorrhage might prove fatal. Should this be done, cold water thrown over the loins will be the proper treatment.

ABORTION AND MISCARRIAGE.

Premature expulsion of the foetus is called abortion in the earlier periods of gestation, and miscarriage or premature labor in later ones. It is quite often found to be from sympathy. By some, however, it is regarded as strictly the result of contagion. If so, the contagious principle must be in the smell of the discharges that follow; for the sense of smell in horned cattle is very acute, and is apparently in very close connection with the nervous system. Such events are great loss to the cattle owners. Common causes are accidents, or violence of some kind,—being hooked and pushed about by other cattle, or kicked and clubbed by brutal herdsmen; jumping, leaping, falling, etc. Some suppose it to be caused, in many cases, by ergot in the hay or other fodder, such as has been badly harvested or grown in a wet season, especially on low, swampy ground.

HOW TO KNOW IT.—There will be dullness, suspension of rumination, anxiety in the countenance, separation from companions, at length a small water bag will be passed, and a little later a foetus. Or, perhaps, all that may be noticed, to indicate something wrong, will be a tiny foetus found somewhere. More or less discharge will follow. It will be of a bloody, mucous character, and is likely to become purulent after a few days.

TREATMENT.—For the original case, (in which the mischief is nearly always completed before discovered) nothing special can be done, except to syringe the parts out well with tepid water, and follow this with a solution of Leithhead's Phenyle, 1 ounce to a gallon of water. Inject a little twice a day. Continue it a week or more.

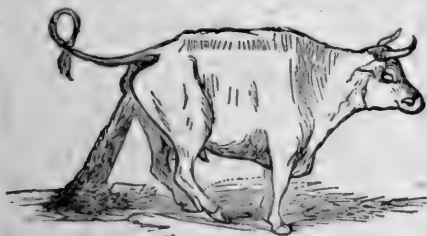
PREVENTION.—This is really the important point. Isolate the cow that has aborted immediately, and with the above treatment very likely the bad effects of her example will be arrested. Always shut a cow up when bulling; her jumping on the others, or, instead, being ridden by them, is apt to injure them and her alike.

The feeding of hemp seed deserves consid-

erate attention, owing to the experience of recognized authorities on breeding. It is given in pint feeds once a day, with other food, from the time immediately preceding the bulling season through four or five months. As to the general diet, feed well so as to keep cows in good, strong condition, but avoid obesity.

UTERINE HEMORRHAGE OR FLOODING.

Bleeding from the womb or vagina sometimes follows protracted labor, from injuries to those parts by carelessness or accident during parturition; or it may result from unskillful removal of the placenta. The continuance of bleeding is due to the failure of the womb to contract, as it should do, after



EXAGGERATED ILLUSTRATION OF UTERINE HEMORRHAGE.

delivery. It is called flooding on account of its coming away in such large quantities, the womb-ful being evacuated at a time.

WHAT TO DO.—Throw cold water, by the bucketful over the loins; cool the hand and insert it into the womb, which will sometimes

cause the latter to contract upon it. If this means prove insufficient, inject cold water into the womb, with a suitable syringe.

INVERSION OF THE WOMB.

Following immediately upon parturition, after-pains sometimes come on so violently that the womb is forced right out through the vagina, and is turned inside out, and lies or hangs behind the cow a pink, baglike sub-



INVERSION OF THE WOMB.

stance covered with cotyledonous (mulberry-like) excrescences all over the surface.

WHAT TO DO.—If dirty, take it up on a clean sheet, and wash it with tepid water with a little alcohol in it—a wineglassful to a pint of water. Sponge it over with laudanum, and carefully return it. This is an exceedingly delicate task, though not difficult otherwise. The uterus will generally suck down into its proper place without any difficulty, but if necessary to manipulate the walls of the vagina somewhat, this may be done—always with extreme care and the minimum amount of force that will accomplish the object. Then place



TO PREVENT INVERSION OF THE WOMB.

the cow in a stall where the hind feet will be at least six inches higher than the forward, and apply a harness and compress over the external opening, as shown in the annexed cut. If straining is violent and continues any length of time, give internally the following mixture: 1 ounce chloral hydrate, one pint water, mix. Give as one dose; if necessary, repeat it in half an hour.

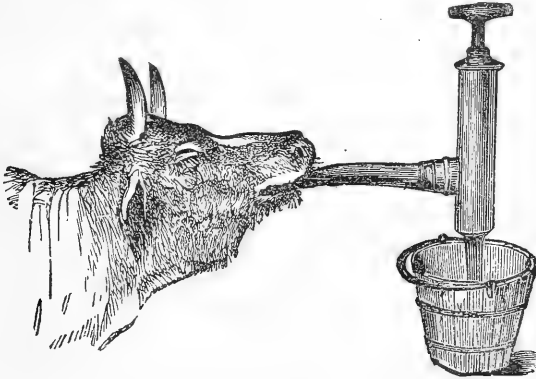
PUERPERAL FEVER OR METRO-PERITONITIS.

This disease is often confounded with parturient apoplexy, so that, notwithstanding the difference between the two conditions, they are mistaken one for the other. The antecedent facts will usually be found to be diffi-

is constipation. All the symptoms, and especially the belly pains, increase; prostration comes on; finally, stupor (coma) sets in. Death soon follows. Give Epsom salts in 1½ pound doses with plenty of water. Give Leithhead's Fever Cure in proper dose for cattle. In early stages a little blood may be drawn. If necessary, use stomach pump (see cut.) Apply Leithhead's Blister Salve to the belly. If constipation is still obstinate, a pint of tepid water may be injected into a vein. Upon return of the health give Leithhead's Condition Powders.

PARTURIENT APOPLEXY.

HOW TO KNOW IT.—There is at first a staring, wild look about the eyes, disinclination to move, loss of milk, and increased temperature; but these symptoms are seldom so marked as to attract special notice. They



USING THE STOMACH PUMP.

Manner of giving food or medicine during stupor.

cult parturition, exposure to cold storms or extremes of temperature, retention of the placenta, or overdriving prior to calving, and the like circumstances. Thin, poor cows that have been changed suddenly from a dry, short pasture to rich succulent feed at or near the time of calving, are especially apt to have it. It may come on at any time from a few hours after calving up to the third or fourth day.

The cow has high fever, capricious appetite, with rumination suspended; colicky pains; kicking at the belly; getting up and lying down frequently,—sometimes, remaining on the knees several minutes. The head is turned towards the flank; the pulse is quick, hard and wiry; the respirations are accelerated, short and confined to the thorax, so as to avoid moving the abdomen as much as possible; the belly is tucked up, the urine is scanty and high colored; and usually there

are followed by a staggering gait and weakness across the loins, till suddenly the animal falls, when the eyes are found to be blood-shot and glassy, the pupils dilated and the lids twitching. The mucous membranes become purple; she gets perfectly blind and comatose (stupid); the head is usually turned back to the side; the pulse gets gradually slower, fading into imperceptibility; the breathing is slow and stertorous. In this stage the pupils contract, the temperature falls decidedly, sometimes as low as 95 degrees. The udder becomes hard and unyielding; the paunch fills with gas, causing marked interference with the breathing; convulsions set in, and death soon follows.

WHAT TO DO.—Prevention is the main thing. If the cow is manifestly plethoric, give light, soft diet, with Leithhead's Stock Food once or twice a week before calving. If the

attack appears purge with $1\frac{1}{2}$ pounds of Epsom salts, and bleed freely if the pulse be full. Give a stimulant such as whiskey, etc. If she recovers, do not breed her again, but sell her to the butcher.

LEUCORRHOEA OR WHITES.

This is catarrh of the vagina and womb, with a chronic discharge of the muco-purulent, white fluid which hangs around the vulva and tail, and has a very offensive odor. It is not attended with serious constitutional disturbances, but sometimes causes nymphomania or "buller." Such cows rarely breed, and even if they do so, are apt to abort. Sometimes the discharge is so profuse as to keep the cow poor.

WHAT TO DO.—Syringe the parts with tepid water, and inject Leithhead's Phenyle 1 ounce to one gallon of water, repeating this twice a day. Feed on nutritious but light diet. Give Leithhead's Condition Powders.

GNORRHOEA.

This is catarrh of the generative parts of the bull,—little ulcers of caneres in the sheath on the penis with a whitish discharge, which is chronic. Suspend all service and give him 1 pound of Epsom salts, and when the bowels return to their normal condition give Leithhead's Condition Powders for three or four weeks. Draw out the yard with soft linen cloth, and bathe all affected parts with Leithhead's White Liniment diluted with four times water. Continue the application once a day, till cured, and do not let him serve a cow, for the reason that it is contagious. If any caneres are seen, touch them once a day with lunar caustic. Feed on green food, if possible.

MAMMITIS OR INFLAMMATION OF THE UDDER.

This is most common after a parturition which occurs before the secretion of milk has assumed a normal condition, especially in the case of heifers at the first calving.

The type of mammitis that takes on the active inflammatory character is ushered in with a shivering fit, which is succeeded in a short time by fever and dullness. The bag becomes hot and hard, red, swollen and sore. It being so painful to the touch, the cow is very averse to being milked.

If dependent upon calving, and the cow is fat and feverish, give one pound of Epsom Salts. Foment the bag with hot water several times a day, and as often as three or four times a day remove the milk that does form, and apply the following lotion:

4 ounces gum camphor.
1 pint olive oil.
Mix.

Rub in well three times a day. If the inflammation does not go out by the time purgation ceases, give Leithhead's Condition Powders for a week or two. If the case goes not to suppuration, and it breaks on the outside, foment the bag, and inject Leithhead's Phenyle one ounce to a gallon of water three times a day. In all cases where there is much swelling, support the bag by a bandage passed around the body over the loins. If a quarter sloughs off, dress the wound with this solution. When it is merely a case of curdled milk (garget), give a tablespoonful of saltpetre night and morning in a bran mash, and milk her with special care, to make sure of getting all the milk away.



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Diseases of Swine.

The utmost care must be exerted to prevent disease from your swine herd.

When disease does appear it is so general to be death dealing that caution is of more value than treatment.

The few ailments of hogs are generally in the shape of contagious epidemics of the most serious kind, such as Hog Cholera, etc.

One good caution is to not allow any new comer in the regular herd until you are assured they are free from disease.

Disinfectants should be used for the slightest reason, as a matter of safety. Leithhead's Phenyle is the best disinfectant for this purpose. The dilution of Leithhead's Phenyle for use is usually with 50 parts of water.

HOG CHOLERA.

Hog Cholera appears under the following three headings:

1. Malignant Epizootic Catarrh.
2. Contagious Fever of Swine.
3. Contagious Pneumo—Enteritis.

When any of such disease appears the cheapest way is to kill the sick ones. Bury deep. Thoroughly disinfect with Leithhead's Phenyle.

MALIGNANT EPIZOOTIC CATARRH.

This disease generates quickly and fatally in filthy yards.

This poison germ attacks the mucous membranes of the animals. A cold predisposes the animal to this disease.

It is known by difficult breathing, panting, lifting of the flanks, and a short hoarse cough. There is fever. The head will be stretched out and drooping. Running at the nose. Effort to vomit. General constipation; but sometimes diarrhoea. Animal will show a stiff tottering gait.

In death will be found inflammation of the Nasal passage of the upper throat and windpipe and lungs, and more or less solidified.

The second form of the disease shows less cough, less difficulty in breathing, but decided paralysis and tottering gait.

Constipation followed with profuse diarrhoea. The back arched; partial or total

blindness; enlarged glands and scrofulous ulcers. After death the intestinal lining will be found degenerated and enlarged. An enlarged spleen, soft and dark; liver also affected.

May be water exudations in the chest and belly.

Duration of either form 15 days.

As soon as assured this disease exists in your swine herd, separate the herd and use disinfectants profusely. Any animal showing the slightest ailment should be treated with an emetic dose of 15 or 20 grains of White Hellebore, to be given as instructed under the article headed "Giving Medicine to Swine," or in $\frac{1}{2}$ pint of milk if the animal will drink it.

When this dose has been vomited by the animal, if the symptoms are as described first or in the lungs, give 2 or 3 grains of tartar emetic in a half roasted potato. If the animal will not eat, envelop in a dose of lard and place well back in the mouth.

Apply over the sore spots Leithhead's Blister Salve. Repeat till blistered. As soon as the animal gets relief, give Leithhead's Hog Cholera Cure according to directions.

If after giving the White Hellebore the trouble is seen to be the bowels, instead of giving the tartar emetic give the same amount of calomel in the same way and proceed.

CONTAGIOUS FEVER OF SWINE.

Sometime called intestinal Hog Cholera.

Infection is Virulent.

Incubation last three days to two weeks.

Animal will shiver; prostration, nose hot and dry. The animal will lay under the litter and refuse food.

There will be great thirst. Temperature in the rectum will show 103 to 105 degrees.

The skin will be sore, heated, red patches which will disappear upon pressure. Black spots. Eye sunken; unsteady gait. Pulse weak and rapid. Tongue much furred.

The belly will be so sore that the animal will scream and flinch when handled. Costiveness sometimes continues often after the third day; foetid diarrhoea.

Adds More Flesh than the Price—Leithhead's Hog Cholera Remedy.

Slime and blood may pass showing ulceration of the bowels.

Kill and bury the infected animal. Separate all other animals showing rectal temperature above 100 degrees.

Give these Leithhead's Hog Cholera Cure as directed.

Acidulate the drinking water by adding a small amount of sulphuric acid sufficient to just be tasted.

In costive trouble give Castor Oil in two ounce doses.

CONTAGIOUS PNEUMO-ENTERITIS.

PURPLES—HOG CHOLERA.

Contagious, inflammation of lungs and bowels. The skin showing purple or red blotches.

As malignant Anthrax or charbon is sometimes mistaken for this disease, we place the symptoms side by side as stated by Dr. Klein.

CONTAGIOUS PNEUMO- ENTERITIS.

Incubation period 2 to 5 days. Other animals rarely contract this disease; spleen rarely enlarged or otherwise changed. Blood after death of ordinary appearance; no bacillus anthracis in the blood, but numberless bacilli in the serum of thorax and abdomen. Lungs and bowels always both inflamed. Cough always present. The red and purple color diffused over the surface of an erysipelatous appearance.

Erysipelatous form of Pneumo Enteritis—Animal dull, will not eat, unwilling to move, cough, difficult to urinate, bowels constipated, dung hard and black. The purple and red blotches appear about the fore part of the animal. Possible discharge of black or purple fluid from the nose. Paralysis of hind limbs. Animal forced up, he will drop to the ground. Animal dies in one to three days.

Sore throat type—of Pneumo Enteritis—symptoms about the same as for the Erysipelatous form except the throat will give all indications of filling up and choking. Some-

TRUE CHARBON.

Period of incubation a few hours to 3 days, easily transmissible to other animals. Spleen always enlarged. Blood after death dark and fluid. Bacillus anthracis in the blood. Lungs and bowels frequently not implicated. Cough may be present.

Discoloration; local Carbuncular appearance.

times death will result by choking within an hour. Treat with Leithhead's Hog Cholera Cure.

SPLENIC FEVER, MALIGNANT ANTHRAX OR CHARBON.

Very rare in hogs.

The description under Contagious Pneumo Enteritis as a comparison is sufficient.

Care need be taken in handling as it is contagious to man.

Use Leithhead's Phenyle solution for disinfectant. Every animal infected had better be killed.

GIVING MEDICINE TO HOGS.

To give liquid to all objecting hog use a horn and pour down after drawing up the head of the hog by slipping a noose over the upper jaw. The obstinacy of the hog pulling back will bring his hinder parts to the floor.

INFLAMMATION OF THE LUNGS.

Laborous breathing, more or less cough, shivering, loss of appetite. Make the animal comfortable. Keep a preparation of tepid water and mustard on the side; give four teaspoonfuls in feed or in solution of the following mixture as required. Bisulphate of soda, nitrate of Potash, equal parts.

Good nursing is of most benefit.

INFLAMMATION OF TONSILS.

Often fatal.

Known by swelling under the lower jaw and neck; difficult swallowing.

Scarify the parts with keen blade knife till blood flows freely.

Apply hot water to the part repeatedly to induce bleeding and reduce the inflammation.

Inject into the rectum the following:

4 oz. Magnesium Sulphate.

2 drachms Oil Turpentine.

½ pint soap suds.

Give in gruel 2 teaspoons Turpentine, 2 teaspoons lard oil. If it will not eat swab the tonsils with this mixture.

STAGGERS—CONGESTION OF THE BRAIN.

Usual in fat hogs.

Eyes red; stupid; pulse hard and rapid; bowels constipated.

As the disease progresses the animal becomes blind, turning in a circle and may fall unconscious.

The animal may fall suddenly, stiffen out and froth at the mouth. Breath with a snorting sound.

Dash cold water from a height or bleed.

MEASLES.

Caused by eating the eggs of the tapeworm of man. The excrement of dogs may carry the eggs of tapeworm and can need be looked to, to prevent. No treatment of avail.

TRICHINA.

Infects rats, hogs and man.

Prevention necessary—Keep away from mice, rats, slaughter pens.

No cure.

WORMS.

Lard Worm.

Kidney Worm.

Always produce death; when located kill the animal and burn.

MANGE, SCAB OR LICE.

Easily discerned.

Leithhead's Phenyle solution will kill these pests, and if used properly will rid the pen also of any stray pest.

DIARRHOEA.

Diarrhoea in young pigs is quite common during their first ten days. To cure feed the sow on following preparation:

2 oz. Foenogreek.

2 oz. Anise.

2 oz. Chalk.

1 oz. Gentian.

2 oz. Carb. Soda.

Give tablespoonful in every feed.



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Diseases of Chickens.

PERIOD OF INCUBATION.

Turkey setting on eggs of the	
Hen	24 days
Duck	27 days
Turkey	26 days
Hen setting on the eggs of the	
Duck	30 days
Hen	21 days
Duck	30 days
Goose	30 days
Pidgeon	18 days

APOPLEXY.

Known by the bird moping for several days. The bird will at last fall and die with a severe struggle.

Prevention is exercise.

Avoid stimulating foods.

VERTIGO.

The fowl will run in a circle, loses some control of limbs; sometimes falls and dies.

When observed, hold the head under a stream of cold water.

Place the fowl on a low diet; give 10 grains of Jalap after an attack.

CROP BOUND.

Hardening of the crop from irregular feeding. Treatment, puncture the upper part of the crop. Sew up the incision after taking out the congested food.

DIARRHOEA.

Give Leithhead's Poultry Powder.

CATARRH.

A watery discharge from the nostrils. The eyelids will swell, extending sometimes to the face. Be sure to have comfortable quarters. Give Leithhead's Poultry Powder.

BRONCHITIS.

(Sometimes called Croup.)

Effects of a cold settling on lungs and air passage.

Known by cough; raising the head to breathe; offensive smell.

In severe cases give a dose of 1 grain calomel $\frac{1}{8}$ grain Tartar Emetic. Swab the throat with powdered borax; put $\frac{1}{4}$ oz. chloride of Potash in 2 quarts of water for drinking purposes.

ROUP.

Symptoms like severe catarrh but the discharge from nostrils is thick and overly offensive.

Froth at the corner of eyelids and they swell shut.

In all cases the diseased fowl must be separated from the flock. The premise must be disinfected with a solution of Leithhead's Phenyle.

There is little use of treatment. You must feed soft feed. Keep in warm place. Give from a teaspoonful to tablespoonful of Castor Oil. Make a solution of 1 part Chloride Soda, 2 parts water, and syringe through the slit of the roof of the mouth, with this solution:

Have made up the following:

$\frac{1}{2}$ oz. Balsam Copaiba.

$\frac{1}{4}$ oz. Licorice Powder.

$\frac{1}{2}$ drachm piperine.

Make into thirty powders.

Give one, two or three times a day.

Always bury the dead fowl.

GAPES.

A parasitic worm in the wind pipe. Usually in chickens two to four months of age.

Use a pocket lens to detect the presence on the head of the chicken—this tick like parasite. Bathe the head with a solution of Leithhead's Phenyle 1 to 100.

To cure the gapes, insert a quill feather properly shaped, dipped in turpentine into wind-pipe at base of tongue; turn the feather and withdraw. Repeat if necessary.

Feed Leithhead's Poultry Powder according to directions.

RIP.

A result of a disease forming a crust at the tip of the tongue.

Remove. Wash with dilute solution of Phenyle. Follow directions for roup.

Eggs in Winter When Using Leithhead's Poultry Powder.

INFLAMMATION OF EGG PASSAGE

Known by soft shell eggs. Feathers of back ruffled. Straining to discharge contents.

Give a dose of 1 grain calomel.

1-12 grain Tartar Emetic.

Feed nourishing food. Some bone meal.

LEG WEAKNESS.

Easily known.

Feed Leithhead's Poultry Powder.

Insect and animal food if possible.

LOUSINESS.

Wash-every crack and crevice with a solu-

tion of Leithhead's Phenyle. Have dust baths.

CHICKEN CHOLERA.

Saturate the roosts with kerosene and also the floor and sides of the coop.

Grease every chicken with mercurial ointment mixed with equal parts of lard. Partially heat this preparation to make applications easier. Mix Leithhead's Hog Cholera preparation with the feed.

A tablespoonful for feed of twelve chickens. Continue during the Cholera season of May to November.

It is a good preventative.



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Diseases of Sheep.

DISTEMPER OR EPIZOOTIC CATARRH.

A slight discharge from the nose of watery consistency. Loss of Appetite. No cough. Animal weak, depressed, pulse faster and weaker.

In continued trouble without relief the nasal discharge becomes thick and glutinous tinged with blood. Eyes half closed. Lids gummed. Respiration becomes difficult.

Remove such animals to warm and ventilated quarters. If the bowels are costive, have your druggist prepare the following:

- 1 oz. Carb. Ammonia.
- 1 oz. Rhubarb.
- 1 oz. Ginger.
- 1 oz. Gentian.

Simmer the last three items in a quart of water and add the ammonia when cold. Give two tablepoonsful 4 times a day.

Good food, nourishing drinks and nursing are of the most importance.

Give Leithhead's Stock Food when the animal begins to improve.

GRUBS IN THE HEAD.

Caused by the sheep gadfly depositing its eggs in the nostril.

This is done in July and August. They cause much pain. No good treatment to rid the sheep of them.

Prevention is the best.

Keep a portion of the field plowed for the sheep. Smear the sheep's nose once a day during the fly season with tar.

APOPLEXY.

A trouble from being overly fat.

The sheep will leap suddenly in the air and fall. Unless relieved death results immediately.

Bleeding is the only remedy. Prevention—Watch for the early symptom, such as dullness, partially unconscious; nostrils and pupils dilated.

Membranes of nose deep red or violet; pulse hard; breath difficult. Bleed immediately.

Give 1 ounce Epsom Salts every six hours till it produces action of the bowels.

INFLAMMATION OF THE EYE.

If serious, take a little blood from the facial vein. The vein running obliquely from the eye. Bathe the eye and apply the following receipt twice a day with Camel's hair brush.

- Nitrate Silver, 5 grains.
- Water, 1 oz.
- Laudanum, 15 drops.

SWELLED HEAD.

Caused by bites of serpents or insects, etc. Bathe with saleratus water.

VEGETABLE POISONING.

Bathe the parts affected with hot water and apply Leithhead's White Liniment.

TETANUS LOCK JAW.

Caused by an injury of some kind. The animal will be hardly able to walk. Jaws will be set. Death generally takes place quickly. It is an excited condition of the nervous system.

Give Castor oil in four ounce doses. Keep the animal warm. Never bleed the animal; many advise this.

SCABS, TICKS AND LICE.

Unnecessary to describe as easily seen and known.

Use Leithhead's Sheep Dip according to the directions.

FOOT ROT.

The skin at the top of the clefts and over the heels become dry, red, moist, warm and rough as though chafed.

Next there will be a discharge with formation of ulcers.

The whole foot eventually becomes a rotten mass filled with maggots.

Animal will be lame, looses appetite.

After curing; in severe cases it is liable to reappear the second and third year.

Leithhead's Sheep Dip Increases the Wool Crop.

Cut away the diseased part cleansing the knife occasionally in a solution of Leithhead's Phenyle.

Prepare a tank and fill a depth of 4 inches with a saturated solution of Blue Vitriol. Keep this solution as hot as bearable by placing hot irons in it during its use.

Allow the sheep to stand in the solution ten minutes.

Then cover the foot with Chloride of Lime, filling the cleft with tow by tying around the fetlock.

Keep on dry and short pasture. Examine frequently. If necessary renew the Chloride of Lime.

A tonic must be given.

Give Leithhead's Condition Powders for this tonic.

FOUL IN THE FOOT.

Due to driving sheep on the road. Wash the foot and cleft with warm soapy water.

Touch the tender and thin parts with a feather dipped in sulphuric acid and then cover with tar.

In any case of foul apply a strong solution of Blue Vitriol.

The above items should be carried when driving sheep.

SWOLLEN FOOT AND GRAVEL.

Extract the gravel, if ulcerated open, dress with Leithhead's White Liniment.

If necessary use a saturated plug of tow. Dip in tar.

MAGGOTS AND BLOW FLIES.

There is no excuse for wounds to be blowed. To avoid, use Leithhead's White Liniment for the healing preparation.

If from filth of the thighs it should be cauterized.

Cleanse the parts, extract the maggots, and apply Leithhead's Phenyle, 1 part in solution with alcohol 4 parts.

Apply Leithhead's White Liniment daily.

Tag the sheep by shearing from under the tail diagonally down to the thighs.

INTESTINAL WORMS.

Very seldom noticed until death allows you to open and investigate. If one in a flock has worms the rest of the flock is surely in the same condition.

Worms do not harm unless in abundance.

It is always good policy to feed Leithhead's Worm Powders occasionally in teaspoonful doses three times a day.

THE ROT OR LIVER FLAKE.

Small flat worms in the liver known by a tenderness and weakness about the loins.

The belly will be swollen. The eyes yellow as in jaundice.

To rub the skin back and forth between the thumb and finger will be soft and flabby and gives a crackling sensation.

Be SURE to remove the sheep to high dry pasture or salt marsh. This is poison to the flake.

Prepare $\frac{1}{2}$ lb. Magnesia Sulphate with $1\frac{1}{2}$ pts. of water. Add 6 teaspoonfuls of turpentine. Shake well before pouring and give one third every two days.

Follow this by feeding Leithhead's Condition Powders—teaspoonful doses.

LUNG WORMS.

This disease is caused by the presence of worms in the wind pipe and bronchial tubes and sometimes the lungs.

Known by a husky cough, quickened breathing, loss of appetite and flesh. The sheep will rub its nose on the ground.

There may be dysentery.

Examine mouth, throat and stools for indication of worms.

Give Leithhead's Worm Powders.

Burn turpentine in pine shavings and have them breathe the fumes.

SPRAINS, BRUISES, ETC.

Follow directions under advice as for the horse.

LAMBING.

If wrong presentations are made the shepherd should be ready with his hand oiled and warmed in warm water to aid the delivery. Be very careful in changing the position of the foetus.

If a lamb gets chilled put into warm bath; dry well; give a few spoonfuls of milk diluted a little and sweetened, a dusting of red pepper in it will be beneficial.



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Glossary of Scientific and Other Terms,

In General Use with Their Definitions.

Ablacatation—A weaning or cessation from suckling.

Abomasum—The last or fourth stomach of ruminating animals.

Abdomen—The portion of the body containing the stomach and intestines; the belly.

Abnormal—That which is not natural or regular.

Abortion—The casting of the young in an unnatural manner, and before the proper time.

Abrade, Abrasion—To rub off, to wear away by contact, as rubbing off the surface of the skin, producing galls.

Abcess—A swelling and its cavity containing pus or matter. A cavity containing pus.

Absorbent—In anatomy, those vessels which imbibe or suck up, as the lacteals or lymphatics. In medicine, any substance, as chalk, magnesia, etc., used to absorb acidity in the stomach.

Absorbition—The taking up by the vessels of the body of any substance either natural or unnatural, as the serum of dropsical swellings.

Acute—Severe; sharp. In diseases, those which soon come to an end in contradistinction to chronic.

Adhesion—A joining together, as the union of parts in healing.

Adhesive—That which adheres; as certain plasters.

Adipose—Fatty matter; belonging to fat.

Adolescence—The period between puberty (the age of procreation) and the full development of the physical system.

Adult—The age succeeding adolescence, and preceding old age.

Aerate—Mixing with air, as the blood in the lungs, by which it absorbs oxygen.

Affection—Disease, or disease of some particular part.

Affinity—The attraction which causes particles of bodies to adhere and form compounds. That which causes substances to cohere.

Affluence—Determination of the blood or of humors to a part.

Albuminuria—That condition in which the

urine contains albumen and an excess of urea, coagulable by means of nitric acid and heat.

Albumen—Substances, animal and vegetable, resembling the white of an egg.

Aliment—Solid or liquid substance taken as food.

Alimentary Canal—The bowels.

Alkali—Any substance which will neutralize an acid, as magnesia, soda, potash, etc.

Alter—A term in common use for castration.

Alterative—A medicine changing the functions and condition of the organs of the body.

Amaurosis—Partial or total loss of vision from paralysis of the retina.

Amputation—The operation in surgery of cutting off a limb.

Anaemia—Poverty of the blood as opposed to plethora. Too few red corpuscles and too many white corpuscles in the blood.

Anasarca—Dropsical swellings as of the limbs, abdomen, chest, etc.

Aneurism—Dilatation of an artery producing a tumor; lesion of an artery; dilatation of the heart.

Analysis—Separation into parts; resolving into the original elements.

Anatomy—The art of dissecting, or separation of the different parts of the body. The science of the structure of the body, as learned by dissection.

Anchylosis—The stiffening or rendering rigid a joint.

Anaesthetics—Agents which deprive of sensation and suffering, as chloroform, ether, etc.

Anodyne—A medicine to allay or diminish pain.

Antacid—Opposed to or an antidote to acids.

Antagonism—Opposed in action; one contradicting another.

Anterior—Before; in front of another part.

Anthelmintic—Medicine to kill or expel worms.

Antidote—That which counteracts hurtful or noxious substances. A remedy to counteract the effects of poison.

Antiperiodic—Medicine to arrest or retard the return of a paroxysm in periodic disease.

Antiseptic—Agents for preventing, arresting or retarding putrefaction.

Anus—The fundament, or lower portion of the bowel at the tail.

Aperient—Laxative medicine; that which gently operates on the bowels.

Aptha—Ulceration of the mouth, beginning with minute vesicles and ending in white sloughs.

Apoplexy—Sudden effusion of blood into the substance of other organs or tissues.

Aqueous—Watery; having the property of water, as watery matter, aqueous pus.

Aromatic—Strong smelling stimulants, given to dispel wind and relieve pain.

Artery—Blood vessels which carry the red blood from the heart.

Articulate—Joining, working together or upon one another, as the bones.

Asthma—A disease attended with difficulty of breathing, and a sensation producing wheezing, coughing and other distressing symptoms.

Asphyxia—Death from strangulation of the lungs, from want of air.

Assimilate—To make like another; assimilation of food in the nutrition of the body.

Astringent—That which causes contraction of the bowels or vital structures. Astringents are medicines which suppress discharges, as from the bowels, blood, mucus.

Attenuate—To draw out, to make thin, reduce in size.

Atrophy—Wasting of a part, as the muscles.

Atony—General weakness, want of tone.

Augment—To increase.

Auricle—The external part of the ear; also parts of the heart, one on each side resembling ears.

Balk—To refuse to pull, or to refuse to go forward at command.

Bars—(Of the hoof). The two ridges of horn, passing from the heels of the hoof toward the toe of the frog. (Of the mouth.) The transverse ridges on the roof of the mouth of the horse.

Base—The lower part, as the base of the brain; the foundation.

Biliary—Belonging to or pertaining to bile. Biliary duct, a canal containing bile.

Biology—The doctrine of life, or of living bodies.

Bioplasm—The so called living or germinal self-propagating matter of living beings.

Biped—Two footed.

Bolt—To swallow the food hurriedly without proper chewing.

Bolus—Medicines formed into a round or conical mass, for ease in administering, of-

ten termed a ball. The cylindrical shape is the proper one.

Boot-Buffer—A leather band, worn to prevent one foot cutting the other in traveling.

Bots—The grub of the fly *equus equi*, when in the stomach of the horse.

Bougie—An instrument for opening the urethra, or urinary, or other passages.

Broxy—A term often applied to a number of fatal diseases of sheep, especially to a form of anthrax or carbuncular fever.

Bronchia—The first two branches of the wind-pipe. Bronchitis is an inflammation of the bronchia.

Cadaverous—Having the appearance of a dead body.

Caesarian Operation—To cut into the womb by the way of the abdomen, when natural delivery cannot be accomplished.

Calcareous—Containing lime, lime-like.

Calculus—Any hard, solid concretion found in any part of the body, as stone in the bladder, gall-stones, etc.

Calefacient—Anything producing warmth.

Calks, or Calkins—The heel of the horse-shoe when turned down to prevent slipping.

Callous—Induration; a hard deposit; excess of bony matter.

Canal—A tube or passage, as the alimentary canal, (throat), tympanic canal, etc.

Cancer—A hard, unequal, ulcerating tumor, which usually proves fatal.

Canine Teeth—The teeth between the lateral incisors and the small molars of the jaw.

Canker—Eroding ulcers of the mouth; virulent, corroding ulcers. Any sore which eats or corrodes.

Cannon-Bone—The shank, or bone below the knee or hock. The metacarpal or metatarsal bone of the horse.

Canula—A hollow tube of metal or other substance, variously used in surgery.

Capillary—Hair-like; applied to the minute ramifications of the blood vessels.

Capped Hock—A swelling on the points of the hock of the horse.

Capsular Ligaments—Ligaments surrounding the joints.

Capsule—A membranous bag or sac.

Carbon—Woody matter. Charcoal is impure carbon; the diamond is pure carbon. Carbonic acid is expelled from the lungs in the act of breathing. Carbonic oxyde in the blood or lungs is fatal to life.

Cardia—The superior or oesophageal orifice of the stomach; and of the heart.

Caries—Ulceration of the substance of the bones.

Carminatives—Warming, stimulant, aromatic medicines, used in colic and wind.

Carotid Canal—A canal in the temporal bone, through which the carotid artery, and also some nervous filaments pass.

Cartilage—Gristle; the substance covering the ends of bones, moving and working upon each other.

Caseine—The nitrogenized constituent of milk. Blood fibrin and albumen is identical in composition.

Castrate—To geld, emasculate, deprive of the testicles.

Cataplasm—A poultice, either medicated or not. It sometimes takes name from the special agent employed, as sinapism, a mustard poultice.

Catarrh—A cold attended with running of the nose.

Cataract—An opacity of the crystalline lens of the eye, causing partial or total blindness.

Cathartic—Purgative medicine, used for freely opening the bowels.

Catheter—An instrument used for drawing the water from the bladder, and for other purposes.

Caustic—Any burning agent, as potash, nitrate of silver. To cauterize is to burn, generally applied to the use of the hot iron in diseases.

Cavity—A depression, as the cavity of a wound.

Cellular tissue—The membrane or tissue which invests every fiber of the body, composed of minute cells communicating with each other, and which serve as reservoirs of fat.

Cephalic—Pertaining to the head.

Cerebral—Pertaining to the brain.

Cervical—The neck; belonging to the neck.

Chalybeate—Containing iron. Any medicine of which iron forms a part.

Cholagogue—Medicines to increase the secretion of the bile.

Cholechloride—A medicine which increases the evacuation of the bile.

Chole—The bile.

Chronic—A lingering, long-standing disease, succeeding the acute stage. A seated, permanent disease.

Chyle—The milky liquid, as taken from the food during digestion, and prepared from the chyme, and ready to be absorbed by the lacteal vessels before being poured forth into the blood.

Chyme—The food modified and prepared by the action of the stomach.

Circumscribed—Limited. In pathology applied to tumors distinct at their base from the surrounding part.

Circulation—The vital action which sends the blood through the arteries, and back again through the veins to the heart.

Clyster—Liquid medicine injected into the lower intestine.

Coagulate—To clot, as the blood when drawn.

Coition—The act of copulation; union of the sexes.

Colic—Acute pain in the abdomen, intensified at intervals.

Collapse—A falling together. A closing of the vessels. Extreme depression of the vital powers.

Colon—The largest of the intestines, or more properly, the largest division of the intestinal canal.

Coma—Lethargy. Drowsiness produced by depression of the brain and other causes.

Comatose—Constant propensity to sleep.

Constipation—A state of the bowels in which the evacuations are unnaturally hard. A stoppage of the evacuation of the bowels.

Convalescent—Returning to health after sickness.

Conception—Fecundation by action of the male.

Congenital—Born with another; of the same birth. Belonging to the individual from birth.

Congestion—An accumulation of clogged blood in the vessels, or in the parts, as the lungs, brain, etc.

Constrict—Drawing or binding together, as constriction of the muscles of a part.

Contagions—A disease that may be communicated by contact, or the matter communicated, or proceeding from the breath or emanations of the body.

Contorted—Twisted, twisting, writhing, as the body in pain, or from the result of disease.

Contusion—A bruise; a wound made by a blow or bruise.

Concretion—Adherence of parts naturally separate. In chemistry, condensation of fluids or other substances into more solid matter.

Condiment—Substances used to improve or heighten the flavor of food.

Confluent—Running together, as in pimples or pustles when they become confluent.

Copious—Plentiful, abundant, as a copious discharge.

Core—The hard portion of purulent matter, as in boils.

Corn—A diseased portion of the foot, in the horse, between the bar and the quarter, usually on the inside.

Coronet—The upper part of the hoof, just where it joins the skin.

Corrosive—That which eats away, destroying the texture of the living body.

Corrugation—Contracting the skin into wrinkles.

Counter Irritation—An application to irritate one part to relieve pain in another. A blister or mustard poultice produces counter irritation.

Cow-Pox—Peculiar pustules upon the teats of cows, from which the vacine matter is obtained, used to prevent contagion from small-pox, or to mitigate the intensity of the disease.

Cranium—The skull. **Cranial**: Pertaining to the skull.

Cribbing (of Horses)—The act of seizing any hard substance, or pressing thereon with the teeth, and gulping; sometimes called wind sucking, though the latter is not necessarily cribbing.

Crisis—In disease, that point or period which determines a favorable or unfavorable termination.

Crupper—The buttocks of a horse.

Crural—Pertaining to the legs, as the crural arteries and veins.

Crust—The hoof, so-called. The outside laminae of the hoof.

Crusta—A scab.

Curb—A soft swelling, becoming hard, situated on the back part of the hind leg, just below the point of the hock.

Cuticle—The epidermis or scurf skin. The skin is composed of the cutis vera, rete mucosum and cuticula.

Cutaneous—Of the skin, as a cutaneous affection.

Cyst, Cystis—A small bladder or sac; allied to those containing morbid matter or parasites, which become encysted, or inclosed in an envelop.

Cystic Duct—The duct which proceeds from the gall bladder, uniting with the hepatic duct.

Cystitis—Inflammation of the bladder. **Cystoplegia** is paralysis of the bladder.

Debility—The condition of weakness or feebleness.

Degenerate—To become worse or inferior.

Deleterious—Injurious, poisonous or destructive.

Delirium—Insanity; a wandering of mind in disease.

Depilatory—Any agent or thing which causes the loss of the hair.

Dermal—Belonging to the skin.

Detergents—Medicines having the power of cleansing the vessels or skin.

Diabetes—An excessive flow of urine containing saccharine matter.

Diagnosis—The distinguishing of one disease from another.

Diaphoretic—A medicine which causes perspiration or sweating.

Diaphragm—The midriff. The membrane, or broad muscle, which divides the thorax or chest from the abdomen or belly.

Diarrhoea—A continued and profuse discharge from the bowels.

Diet—Any kind of food or drink. **Dietary**: a regulated allowance of food.

Digestion—The separation and dissolving of the food in the stomach. **Digestive ointment** has the power of resolving tumors.

Dilate—to open wide, as dilation of the eye.

Dilatation—The expanding of a body, as of the heart, arteries, the bladder, etc., from overfullness.

Diminution—A lessening, or decreasing, as of pain, etc.

Disinfectant—An agent capable of neutralizing morbid effluvia, or the cause of infection.

Dislocation—Putting out of joint.

Dissection—Exposing the different parts of a dead body, that their arrangement and structure may be studied.

Distorted—Deformed, crooked, out of the natural shape.

Distend—To stretch out, or swell.

Diuretic—A medicine to increase the flow of urine.

Dorsal—Pertaining to the back. The dorsal column: the back-bone.

Drachm—The eighth part of an ounce.

Drastic—Powerfully acting medicines or poisons.

Drench—Liquid medicine given by the mouth.

Duct—A tube for conveying a fluid or the secretions of the glands.

Duodenum—The first portion of the small intestine, through which the bile is poured.

Dysentery—Inflammation of the mucous membrane of the large intestines, producing mucous or blood evacuation.

Dyspepsia—Serious derangement of the digestive functions.

Dysphagia—Difficulty of breathing.

Dysuria—Painful and incomplete passage of urine.

Ecbolics, Parturients—Agents causing the contraction of the womb.

Ectozoon—Parasites, as lice, infesting the surface of the body.

Eczema—Small pustules crowded together, not contagious, but producing a smarting pain.

Effluvia—Morbid exhalations of the body; sometimes applied to animal and vegetable odors.

Effusion—A flowing out, as of the blood, water or lymph, into the tissues.

Elephantiasis—Chronic lymphangitis, by which the limb is enlarged, resembling the leg of an elephant.

Embryo—The impregnated ovum in the womb, after growth has commenced.

Emetic—A medicine given to produce vomiting.

Emollients—Agents which have the power of softening or relaxing.

Enamel—The hard outer covering of the teeth.

Enema—Medicines given by injection into the bowels.

Engorgement—In animals, vascular congestion, the result of over-feeding.

Entozoa—Parasites within the body.

Enteric—Belonging to the bowels.

Enteritis—Inflammation of the bowels.

Epizootic—Contagious disease, attacking large numbers of horses at one time. Applied to catarrhal fever in influenza, which spreads rapidly.

Equine—Belonging to the horse.

Esophagus—The gullet, or tube of the throat which conveys food to the stomach.

Evacuate—To empty or pass out, as to evacuate the bowels.

Excrement—Refuse matter. The dung.

Excrecence—Unnatural or superfluous growth.

Exhale—Breathing out, evaporation.

Extensor-tendon—The tendons which stretch out the limbs.

Extirpation—The complete removal of a part by means of the knife.

Extravasate—To let out of the proper vessels, as blood after the rupture of a blood-vessel.

Extremities—The limbs.

Exudation—A sweating, or passing out of a liquid through the walls of membranes containing it.

Faeces—The excrement.

Farcy—A disease of the lymphatics of the skin of the horse. Also, a disease allied to glanders.

Febrifuge—A medicine to lower the temperature of the body, and counteract fever.

Fermentation—Incipient decomposition of vegetable substances, from souring.

Fester—To suppurate, and discharge corrupt matter.

Fetid—Having an offensive odor.

Fissure—An opening, a crack.

Fistula—A deep, narrow ulcer, having a passage leading to it.

Fistulous—Resembling a fistula, either in form or nature.

Flanks—That part of the horse between the false ribs, hips and stifle.

Flatulent—Affected with, or caused by, the generation of gas, or wind in the stomach and intestines, as flatulent colic.

Foetus—The young yet unborn.

Fomentation—The application of warmth and moisture, as with a liquid or poultice.

Forceps—Long pointed pincers or nippers.

Fracture—The breaking of a bone.

Friction—Exciting circulation by rubbing.

Fumigate—The application of smoke or vapor.

Function—The office or duty of any part of the body.

Fungus—An unnatural growth resembling mushrooms.

Gall—The fluid contained in the gall-bladder, consisting, principally of the bile secreted by the liver.

Ganglion—A collection or bunch of nerve fibers, causing the enlargement of a nerve, and resembling a knot.

Gangrene—The mortification or death of any part of the body, or of any of its tissues.

Gastric—Pertaining to the stomach.

Gastritis—Inflammation of the stomach.

Gestation—The condition of pregnancy, or being with young.

Gland—A structure for secreting certain fluids of the body, and containing a tube.

Glanders—An exceedingly contagious disease, which is incurable and fatal.

Gleet—Thin matter issuing from an ulcer. In horses, applied to nasal gleet exclusively.

Glottis—The narrow opening at the top of the windpipe.

Granulate—To grow or develop in the form of grains, as new flesh in the healing of wounds.

Gravel—Calculous matter found in the kidneys.

Gullet—The oesophagus, or food pipe leading to the stomach.

Haunch—That part of the body which lies between the last ribs and the thigh. In the horse, the bony region of the hips.

Hemorrhage—A discharge of blood from the vessels containing it.

Hepatic—Belonging to the liver.

Hepatitis—Inflammation of the liver.

Hereditary—Inbred from the parents, as disease, color, vices, and other peculiarities.

Hermaphrodite—Possessing the attributes of both sexes, in a greater or lesser degree; being of, or including both sexes. Said of animals, plants or flowers.

Hernia—Rupture, or soft tumor formed by

the protrusion of any of the viscera of the abdomen.

Homogeneous—Being of the same kind or quality throughout.

Humor—Any fluid of the body, excepting the blood.

Humerus—The upper arm-bone; upper bone of the fore-leg.

Hybrid—The offspring of two different species of animals, as of the horse and ass (the mule.)

Hydragogue—A medicine which removes effused fluids from the system.

Hydrocephalus—Water in (dropsy of) the head.

Hypertrophy—Excessive growth.

Hypodermic—Beneath the skin. Used principally of medicines—as morphia, etc.—applied by injection under the skin.

Hysterics—A nervous disability, mostly among females.

Impotence—Inability to perform the sexual function.

Impregnation—The act of rendering, or state of being, pregnant.

Incision—Cutting into; a clean cut; cutting, as in any operation performed.

Incontinence—Inability to retain the natural evacuations.

Induration—The hardening of a part from the effects of disease.

Incisors—The front teeth of the jaws.

Infection—Communication of disease by miasma or emanations from a diseased body.

Influenza—An epidemic disease, causing general depression, with fever.

Inhalation—A drawing into the lungs; the inbreathing of medicated or poisonous fumes.

Inject—To throw in artificially, as from a syringe.

Injection—Liquid medicine thrown into a natural or artificial cavity.

Inoculation—The production of disease by virus or matter from a sore, communicated from one animal to another.

Integument—The covering which invests the body (the skin), or a membrane covering any particular part of it.

Intermittent—In fevers, a characteristic by which the paroxysms intermit or cease, returning at regular or nearly regular intervals.

Intestines—The bowels. The alimentary canal, leading from the stomach to the anus.

Invigorators—Strengthening medicines, or agents.

Iris—The circular membrane of the eye floating in the aqueous humor, and perforated to form the pupil.

Isomeric—Composed of the same elements

in the same proportions, but chemically and physically different.

Jaundice—A diseased condition resulting from derangement of the liver, and characterized by great lassitude, and by yellowness of the eyes, skin and urine.

Jugular—The large vein of the neck.

Lacerate—To tear. A lacerated wound is a torn wound.

Lachrymal—Pertaining to the tears. The lachrymal duct is the duct leading from the eye to the membrane of the nose.

Lactation—The act of giving suck, or time of suckling.

Lamella—A thin plate or scale of anything; pertaining to the anatomy of the hoof.

Laminitis—Founder; a disease consisting of inflammation of the parts between the pedal or coffin bone and the sensitive laminae.

Langnor—Weakness, faintness, debility.

Laryngitis—Inflammation of the larynx.

Larynx—The swell at the upper part of the wind-pipe, and extending into the throat.

Lateral—At or to one side.

Laxative—A medicine which gently opens the bowels.

Lens—In ocular anatomy, a portion of the eye situated immediately back of the cornea.

Ligaments—The bands of the joints binding them strongly together.

Ligature—Silk or flax thread, or any material suitable for tying arteries. A bandage used in the operation of bleeding.

Liniment—A fluid medicine employed externally and with friction.

Liquefaction—The act or process of reducing a solid substance to a liquid form.

Liver—The largest gland of the body, its officing being to secrete the bile.

Lobe—A round projecting part of the organ.

Local—Confined to a certain part or district.

Lotion—A fluid applied externally, usually by means of a cloth kept constantly wet therewith.

Lubricate—To moisten, as the lubrication of the joints and moving parts by their appropriate fluids.

Lumbago—Rheumatism of the lumber region.

Lymph—A transparent and nearly colorless fluid. The fluid contained in, and poured out by, the lymphatics.

Lymphatics—The vessels of animal bodies which contain the lymph.

Malaria—Infectious and noxious effluvia, from decomposing animal or vegetable matter.

Malformation—Badly or unnaturally shaped or formed.

Malignant—Severe; long; dangerous disease.

Mammal—Having an udder teats for suckling the young.

Mammary Glands—The glands which secrete the milk.

Mange—A contagious disease caused by the presence of acari in the skin.

Marrow—The fatty substance in the hollow of cylindrical bones.

Mastication—The act of chewing the food.

Membrane—A thin animal tissue. The thin covering of the brain, bones and other organs.

Milk Fever—A fever preceding or accompanying the secretion of milk.

Morbid—A state of disease; the product or result of an unnatural state, as morbid humors; a failing, sinking state.

Mortification—The death of a part from gangrene.

Motor—That which causes, or is the instrument of, movement; as, the motor muscles.

Mucus—The substance secreted by the mucous membranes, and effused upon the surfaces of the membranes, as the running of the nose in a cold.

Muscles—The organs of motion. The voluntary muscles constitute the lean meat, or flesh of animals.

Muscular Fiber—Fibers composing the body of a muscle, disposed in distinct bundles.

Nasal—Pertaining to the nose.

Necrosis—Death of a bone, or of a portion of bone.

Nephritis—Inflammation of the kidneys.

Nerves—The fibrous system which conveys sensations to the brain and through the body.

Nervous—Having weak nerves.

Neuralgia—A painful disease, or affection of, one or some of the nerves.

Neurotomy—The cutting or division of a nerve.

Neutralize—To destroy the force or effect of anything.

Obesity—Exceeding fatness.

Obliteration—Alteration in the appearance or function of a part preventing its action.

Occult—Hidden. Applied to diseases whose causes or successful treatment are not understood.

Ocular, Oculary—Relating to the eyes.

Opacity—Want of transparency; that quality of bodies by virtue of which they cannot transmit rays of light.

Optic—Relating to the sight, as the optic nerve; relating to the laws of vision.

Orbit—In ocular anatomy, the bony cavity in which the eye is situated.

Organ—The natural instrument by which a process of function is carried on.

Organic—Composed of, or pertaining to, an organ or its functions; dependent on, or resulting from, organism.

Orifice—The mouth or entrance to any cavity of the body.

Os—The technical name for bone.

Os Calcis—The tip of the back.

Osseous—Bony, or resembling bone.

Os Checele—Scrotal hernia. Any tumor of the hernia.

Ossification—Changing to bone. Bony formation.

Osteo Sarcoma—A fleshy, cartilaginous mass, growing within a bone, enlarging and sometimes fracturing it.

Ovariectomy—The art or operation of removing the ovaries from the female animal; spraying—analogueous to the gelding of the male.

Ovaries—The organs connected with the uterus that mature and give off the ova (eggs) which, when impregnated, produce the foetus.

Ovule—The impregnated germ or egg.

Palate—The roof of the mouth.

Palpitation—A rapid, thumping movement of the heart, from mental excitement or from disease.

Panacea—A supposed universal cure. A medicine applicable to many cases.

Pancreas—The narrow, flat gland extending across the abdomen, sometimes called the sweet-bread.

Paralysis—An affection impairing or destroying the natural function, and especially the voluntary movement, of a part; in popular usage, the palsy.

Parotid—Near the ear. Parotid gland: The largest of the salivary glands.

Parturition—The act of bringing forth young.

Patella—The knee-pan.

Paunch—The first stomach of rumination animals.

Pelvis—That part of the trunk bounding the abdomen, containing a part of the intestines, and the internal urinary and genital organs.

Penis—The exterior male organ of urination, and of the passage of the semen.

Peritoneum—The serous membrane lining the cavity of the abdomen.

Peritonitis—Inflammation of the peritoneum.

Pharynx—The opening or tube at the back part of the mouth which leads to the stomach.

Phthisis—Consumption.

Piles—A disease consisting of chronic dilation or small tumors of the blood-vessels immediately about the anus, and attended with more or less pain.

Placenta—The membrane covering the young in the womb; the after-birth.

Plethora—A full habit of body. Full of blood.

Pleura—The serous membrane lining the interior of the chest, and covering the lungs, which it lubricates with its secretions.

Pneumonia—Inflammation of the lungs.

Poison—Any substance, animal, vegetable or mineral, which applied externally or taken internally, causes either death or serious hurtful changes. Poisons are classified as irritant, narcotic, sedative, acro-narcotic, and acro-sedative.

Poll-evil—A chronic, suppurative abscess, on the summit of a horse's head, around the attachments of the cervical ligaments.

Polypus—A tumor with narrow base, in the nostrils, uterus, vagina, etc.

Post-mortem—Literally, after death. The examination of a dead body.

Predisposed—Prepared or fitted for beforehand; inclined to; as, being predisposed to disease.

Probang—A flexible, knobbed instrument, for pressing into the stomach food or other substance which may have lodged in the throat.

Profuse—Abundant, plentiful; as, a profuse discharge.

Prognosis—The act or art of judging by the symptoms the probable course of a disease.

Prolapsus uteri—Falling of the womb.

Prolapsus recti—Falling of the rectum.

Proud flesh—A fungous growth on an ulcer, or an excrescence of flesh in a wound from excessive granulation.

Pulmonary—Pertaining to, or affecting the lungs.

Pulsation—A beating or throbbing of the heart or arteries.

Pulse—The action or beat of the arteries.

Pumices—The letting down or falling of the coffin bone on the sole.

Puncture—Any orifice made with a pointed instrument.

Pupil—The ball or apple of the eye, through which the rays of light pass to crystalline humors.

Purgative—Any medicine having the power of operation strongly on the bowels.

Pus—The matter discharged from a tumor when lanced, or from sores. Healthy pus is yellowish white in color, and is always secreted in the process of healing.

Putrefaction—The process of decomposition; state of corruption; rottenness.

Pylorus—The lower orifice of the stomach on its right side, through which the food passes to the intestines.

Quittor—An ulcerous formation, resembling fistula, inside a horse's foot.

Rabies—Madness; hydrophobia.

Ranchitis—Inflammation of the spine, rickets. The latter word is probably a corruption of rachitis.

Ramify—Branched; running in various directions.

Rash—An eruption of the skin.

Rectum—The last intestine. The anal gut.

Refrigerants—Medicines or lotions to diminish heat.

Relax—To abate; to become more mild, or less vigorous.

Remittent—Ceasing for a time, as a fever or a pain.

Reproduction—The act or process of reproducing the young; breeding.

Resolvent—A substance or medicine that will sear inflammatory or other tumors, and prevent their suppuration.

Respiration—The act of breathing.

Respiratory murmur—The murmur which, when the ear of stethoscope is applied to the chest, is heard in the lungs, and attending the act of breathing.

Retention—A stopping or withholding, as retention of the urine.

Retina—The expansion of the optic nerve in the back part of the eye, on which the image is produced, in the act of seeing, or vision.

Repulsion—In physics, that power by which particles or bodies are made to recede from each other.

Rickets—A certain diseased state of the bones in children.

Rigidity—Stiffness; inflexibility.

Ringbone—Exostosis, or formation of bony matter, on the coronet bone and pastern bone of a horse's foot.

Roaring—A disease or constriction of the wind-pipe, producing a roaring noise in the expulsion of the breath.

Rumination—The act or habit of chewing the cud.

Rupture—The act of breaking or bursting, or the state resulting therefrom. The common name for hernia.

Saline—Containing salt in solution; tasting saltish.

Saliva—The secretion of the salivary glands, which moistens the food in chewing, and also keeps the mouth and tongue moist.

Salivation—An excessive secretion of saliva. White clover will sometimes produce it in horses, or it may be produced by certain medicines, especially calomel.

Sanguine—Full of blood, Abounding with blood.

- Sanguinification**—The process of producing blood from chyle.
- Sanitary**—Relating to the preservation of health; tending to health.
- Saturate**—To soak so full of liquid or fumes that no more can be held.
- Scab**—The incrustation on a sore. A venereal disease of sheep.
- Scapula**—The shoulder-blade.
- Sclerotic**—The thick, hard, white outer coat of the eye.
- Sciatica**—A rheumatic or neuralgic affection of the hip.
- Secretion**—The separation of various substances from the blood.
- Sedatives**—Soothing medicines; remedies to depress nervous power, or lower circulation.
- Semen**—The male generative product secreted in the testicles.
- Sensitive**—Having feeling. Sensitive lamellae: lamellae of the coffin-bone.
- Septic**—Causing or hastening putrefaction. Antiseptic; arresting putrefaction.
- Serum**—The yellowish, watery portion of the blood remaining after coagulation.
- Seton**—An artificial passage made under the skin, by means of a seton needle, and kept open with tape, silk or the like, which is thereby drawn in, and is moved backward and forward daily, to keep up irritation, with a view to reducing inflammation elsewhere.
- Shank**—The bone of the leg from the knee to the ankle.
- Skin**—The covering of the body, and the organ of touch. It is composed of the scarf skin (cuticle), the middle (retia mucosum), and the inner or true skin (derma).
- Slough (pronounced sluff)**—To fall away, separate from, as in disease, or in moritified parts.
- Socket**—The depression or process in which one organ works on another.
- Soporific**—A medicine to induce sleep.
- Spasm**—A sudden involuntary contraction of the muscles; a convulsion.
- Spasmodic**—Characterized by spasms, as cramping, fits, etc.; recurring at intervals, as colic pains, etc.
- Spavin**—A swelling in or near some of the joints of a horse's leg. It is of two kinds. Bone Spavin is a bony growth (exostosis) in the region of the hock. Bog Spavin, incorrectly called blood spavin, is situated between the tibia and astragalus.
- Spinal**—Relating to the spine, or back-bone.
- Splint**—An excrescence in the shank-bone of a horse. Splint-bone; one of the bones of a horse's leg.
- Spleen**—A livid colored organ, the office of which is not yet well known.
- Spontaneous**—Occurring without any apparent cause from without.
- Sporadic**—Separated, scattered; occurring here and there, as sporadic cases of disease.
- Sterile**—Barren. Not capable of producing young.
- Sternum**—The breast-bone, situated in the fore part of the thorax.
- Stimulants**—Medicines to temporarily excite the nervous or circulatory systems.
- Stomachics**—Agents to promote digestion.
- Strangles**—An eruptive fever attended with inflammation and suppuration of the tissue of the upper part of the throat; called in the United States, distemper.
- Strangulated**—Choked; having the circulation stopped in any part.
- Strangury**—Stopping of a passage.
- Stricture**—Stoppage or obstruction of a passage of the body, by morbid or spasmodic action.
- Stupor**—A dull, sleepy, stupid condition. Loss of sensation.
- Styptic**—A powerful astringent for restraining or stopping bleeding.
- Sudorific**—That which will cause perspiration or sweating.
- Suppuration**—The process of forming pus or matter; the result of inflammation in an abscess or wound.
- Suture**—A stitch or fastening on joining together. The seam of joint which unites the bones of the skull.
- Synovia**—A fluid resembling the white of an egg, secreted at the joints and articulations, which it lubricates and keeps in healthful condition. Joint-oil, so called.
- Taenia**—Literally, fillet or band. The scientific name of the tape-worm.
- Tarsus**—The cartilage towards the edge of each eyelid, giving it shape and firmness. That part of the human foot with which the leg joins, and whose front is called the instep. The hock joint of the horse.
- Tendon**—The dense, fibrous structure in which a muscle ends, and by which it is joined to a bone.
- Tent**—A pledget or plug introduced into a wound.
- Testicle**—The male gland containing the seminal fluid.
- Tetanus**—A disease in which the muscles of voluntary motion are spasmodically but persistently contracted, causing rigidity of the parts affected. When in the face it is called lock-jaw or trismus.
- Thorax**—The chest, or that part of the body between the neck and abdomen.
- Thorough-pin**—A bursal enlargement of the upper and back part of the hock of a horse.

Thrush—Ulceration of the cleft of the frog, and extending over the whole of it, with a discharge of fetid matter.

Tibia—The large bone of the hind leg of the horse, etc.

Tonics—Agents which gradually and permanently improve the system.

Tonsil—An oblong gland situated on each side of the fauces, terminated by the larynx and pharynx, at the rear of the mouth and having excretory ducts opening into the mouth.

Torsion—The act of turning or twisting, as in drawing a tooth with the turnkey.

Trachea—The windpipe.

Tracile—That which may be drawn out.

Trichina Spiralis—A minute entozoon (parasitic mite), which burrows in the muscles, and which, before becoming encysted, sometimes causes the death of the animal. They are principally generated in swine, fowls, rats and other omnivorous feeders.

Tuber—A rounded projection, especially of a bone.

Tubercle—A small tumor, as tubercles in the lungs.

Tumor—A swelling or enlargement, generally applied to those which are permanent.

Ucer—A running sore.

Urea—The principal characteristic constituent of urine. It is white, transparent and crystallizable.

Urinary—Pertaining to the urine.

Urine—The saline secretion of the kidneys.

Uterus—The womb.

Vagina—The canal, in female animals, from the vulva to uterus.

Varicose Veins—Veins, most commonly in the legs, which are permanently dilated, knotted and irregular.

Vascular—Pertaining to the vessels of animal and vegetable bodies, as the vascular functions. The arteries, veins, lacteals, and the like, compose the vascular system. Animal flesh is vascular.

Venesection—Letting blood by opening a vein.

Venous—Pertaining to the veins, or contained in the vein.

Ventral—Pertaining to the abdomen or belly.

Ventricose—A swelled appearance, making the object look bellied.

Vermifuge—A medicine or agent to kill or expel worms.

Vertebra—A division or separate bone of the spinal column.

Vertex—The top of the head.

Vertigo—Dizziness. An indication of plethora, or, frequently, a symptom of some dis-

ease.

Vesicle—A small blister. Any membranous cavity.

Veterinarian—One skilled in (and, usually, legally qualified for) the treatment of the diseases of the horse, cattle and other domestic animals.

Veterinary—Pertaining to the diseases of domestic animals, and treatment of the same; connected with the duties or art of the veterinarian.

Villi—Fine, small fibres. Villous: abounding with minute fibres, as the inner mucous membrane of the stomach and intestines, called the villous coat, from its abounding with villi or minute hairs.

Virulent—Dangerous or malignant; as, a virulent type of disease.

Virus—Contagious or infectious matter.

Viscera—The organs contained in any cavity of the body, particularly of the head, thorax and abdomen.

Viscid—Sticky or tenacious, with a glutinous consistency.

Vision—The act or faculty of seeing; that which is seen.

Vital—Having or containing life. Necessary to life.

Volatile—Giving off vapor, or flying off in vapor.

Vulnerary—Plants, lotions, ointments, drugs or other substances useful in the healing of wounds.

Vulva—The outer opening in female animals, of the generative parts.

Wane—To decrease, as in a fever.

Warbles—Small, hard tumors on the back of a horse, from irritation of the saddle. Tumors occasioned by the depositing of the eggs of the gadfly in the backs of horses and cattle.

Warts—Spongy excrescences on various parts of the body.

Wen—A distinctly defined tumor under the skin, seldom hurtful. An encysted tumor.

Whinny—To utter the call of the horse. To neigh.

Windgalls—A distension of the synovial membranes of a horse's fetlock joints.

Withers—The bony crest of the shoulders, in a horse.

Womb—The uterus, or bag in which the young are carried before birth.

Wound—A breach of the skin of flesh. Surgery classifies wounds as contused, incised, punctured or poisoned.

Wry Neck—An involuntary fixed position of the head towards one of the shoulders.

Yeasty—Frothy, foamy, spumy; as, yeasty pus or matter.

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